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Pelade (Alopecia Areata) and Pseudopelade

JULIUS E. GINSBERG, M.D., CHICAGO

JUST when and where all of the types of cicatricial and noncicatricial baldness were first observed is certainly unknown. However, the authors of the Papyrus Ebers about 1550 B.C. probably were familiar with alopecia areata and pseudopelade, even though they did not recognize them as separate entities or designate them with these distinctive names, for they include several remedies "to expell spotted baldness." Among the topical medications recommended by these ancient authors are burnt prickles of hedgehog immersed in oil, dirt that is in the nail of man, a mixture of red ocher, alabaster and honey over which a powerful incantation has been said. For internal medication, they recommended sebesten, yellow ocher, frankincense, and sweet beer boiled, strained, and taken for four days.¹

The term alopecia areata was adopted from J. Johnson (1644, *Idea*, Univ. Med. Pract.) by Sauvage² who studied the disease in detail in 1763. Common synonyms include porrigo decalvans, area Celsi, area Johnstoni, alopecia circumscripta (Hutchinson), and pelade.

Alopecia areata usually offers little difficulty

in diagnosis, but occasionally must be distinguished from ringworm of the scalp in children, black dot ringworm in adults, chronic discoid lupus erythematosus, pseudopelade, X-ray epilation, and thallium poisoning. It usually begins suddenly as one or more oval, round, or irregular shaped discrete patches of noncicatricial baldness of the scalp. Any or all hairy areas of the body may be involved. A local feeling of tightness or tenderness may precede the hairfall but usually there are no premonitory symptoms. When the entire scalp is involved, the condition is known as "alopecia totalis" and when all hair of the body is lost, "alopecia universalis." When baldness involves the circumference of the scalp, usually progressing from the occiput, the condition is known as "ophiasis" (a condition described by Celsus, the famous Roman physician, about 25 A. D.³) Alopecia areata usually clears spontaneously in three months to a year, but in some cases baldness may remain. In others, the discrete patches progress to varying degrees of generalized hair loss that may have varying degrees of persistence.

The stubby, easily pulled, broken-off hairs that remain in the otherwise apparently normal plaques of skin were designated as "exclamation point" hairs by Crocker. When the plaques are old, no "exclamation point" hairs are seen in the margins of the bald patches. The presence of these hairs indicates that the regions involved

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soon will be bald. Roots of fallen hair, broken off at scalp level, show up as black dots in the follicles and usually indicate rapid extension of the disease.³

The sudden loss of hair frequently is first noticed at the time of a visit to a barber or beautician, and the easy pull loss of hair from the margins of plaques of baldness serves as an index of progression of the condition. The first regrowth of hair often is white and lanugo-like. This hair may fall out, to be replaced by a second or third regrowth which—in the course of three months to a year—assumes its mature normal shape and pigment.

In 230 cases studied by Walker and Rothman⁴ male and female showed equal incidence at all ages and in all forms of the disease. In this series 47 per cent occurred before age 20, and 84 per cent before age 40. The incidence of relapse was 86 per cent in the entire series, and 100 per cent in cases observed 20 years or more. Seventy-five per cent of the cases that developed total alopecia remained totally bald for the entire period of observation.

Alopecia areata had an incidence of 2 per cent in 15,000 skin outpatients as reported by Anderson.⁵ Vitiligo was present in 4 per cent of these cases, and nail changes were common in extensive alopecia. The most frequent precipitating factor was mental shock or acute anxiety—23 per cent—and “nerves” in another 22 per cent. In 27 per cent physical and mental health were excellent.

Sutton feels the prognosis is less favorable in patients under 10 and over 40 years of age.⁶

Histologic studies of early alopecia areata showing an inflammatory infiltrate about hair follicles and lymph and blood vessels suggest a disturbance in nutrition and function of the hair papilla, but whether this disturbance is neurotrophic, psychogenic, endocrine, parasitic, bacterial, or toxic, remains unknown.⁷ There is some familial tendency, but the condition usually is regarded as not contagious. Sabaraud, whose experience was extensive, is said to have declared that an honest medical man knows that he has not greatly influenced the natural course of the disease.⁸ However, dermatologists are generally agreed that treatment is indicated and often helpful.

Topical medications include rubifacient and

irritating lotions, ointments, and paints to produce changes to the point of thick scaling or even bullae formation. The Kromayer lamp or air-cooled quartz lamp has been used at weekly to monthly intervals to produce similar local reaction. Grenz rays, thorium-X, and X-rays have been used with some reported success.

Savill reports benefit from (1) manual epilation of loose hairs; (2) sulfur ointment rubbed well into the patch and for an inch around it; (3) a strong preparation of iodine twice a week, driven in with the negative pole of the galvanic current; (4) tr. of cantharides, ammonia, acetic acid, oil of cade in acetone solution. When bullae form, active treatment is stopped until they dry up. She believes that one-half to three grains of thyroid daily often was effective but found the treatment of universal alopecia and of the beard and eyebrows disappointing.³

Sedative and tonic routines are used by a majority of dermatologists in addition to topical care, and occasionally prostheses. Rest and relief from anxiety and fatigue often are helpful.

Dr. Rothman and his colleagues at the University of Chicago deserve great praise for their study of endocrine influences on alopecia areata, and for their dramatic therapeutic breakthrough with orally administered cortisone.^{4,9} Regrowth of hair in moderate and severe longstanding cases began with fair regularity during the fourth month of therapy with daily doses of 100-150 mg. Similar results were obtained with corticotrophin. Cessation of therapy or decrease of dosage below a critical level (usually 50-75 mg. daily maintenance dose) invariably resulted in relapse. Regrowth of hair appeared to be dependent on dosage of cortisone, duration of the disease, and its severity. Fragility and flaking of nail plates associated with alopecia universalis showed significant improvement after three months of therapy. Confirmation of the results of these therapeutic experiments has been made by many careful dermatologic clinicians.

The name “pseudopelade” was given to this form of cicatricial spotted baldness by Jean-Louis Brocq in a paper on that subject published in 1888.¹⁰ Synonyms include² alopecia atrophicans (Galewsky), a. cicatrisata (Crocker), a. orbicularis (Neumann), alopiecie atrophante en clairieres (Darier), and macular atrophy of the scalp (White). He stated that the disease is extremely rare and “resembles pelade

(alopecia areata) with which it has probably been confused—whence the name, pseudopelade.” No pelade remedies helped his cases in a period of more than two years.

This form of baldness is seen most often in males between the ages of 25 and 45. It is first observed as two or more bald spots 2 to 5 mm. in diameter about the vertex, frontal, or parietal areas of the scalp. There is normal hair in between which has been likened to “footsteps in the snow”³. Symptoms usually are lacking but tenderness, pinkness, and itching may precede baldness. Over a period of many years the small oval or round areas increase in size slowly and coalesce to form large plaques, but the process always stops before total baldness occurs. The skin on the bald spots is white, atrophic, devoid of follicular orifices, slightly depressed, and resembles polished ivory. There are no scales, keratotic plugs, or telangiectases. The hairs on the periphery of the bald spots may have a slight perifollicular erythema. If so, they may be epilated easily, bringing the follicle lining with them and the surrounding succulent translucent glassy sheath which resembles that seen in favus.¹¹ Down hairs, broken hairs, and “exclamation point” hairs have never been seen in true examples of this disease.² It takes 10 or more years for extensive alopecia to occur, and only occasionally do large plaques result in two to three years. Brocq thought the most active phase of the disease was linked with general health such as intercurrent diseases or nervous exhaustion. The rosy tint of the borders of active lesions suggested an infectious origin to some authors, but culture and stained sections made by Brocq, Saboraud, and others were negative.²

In 1905, Lenglet gave the first complete histologic picture when he studied three more of Brocq’s cases, and since then many others have described the pathologic changes.² McCarthy feels that all agree a low-grade type of inflammation begins about the neck of the follicle and spreads downward. The inflammatory infiltrate invades the pilosebaceous structures, destroying the follicles and oil glands, and ending with sclerosis of the connective and elastic tissues. The arrectores pilorum muscles remain as the only indication that follicles once existed in these locations.

Pseudopelade must be differentiated from other types of spotted baldness, especially:

1. Alopecia areata: Onset sudden; progress rapid; baldness usually temporary; “exclamation point” and black dot hairs present; no definite clinical atrophy.

2. Folliculitis decalvans: Discrete follicular papules and pustules present in advancing areas.

3. Favus: Scutula present; fungi usually demonstrable in gray, dry, broken hairs.

4. Lupus erythematosus: Usually telangiectases, atrophy, and follicular plugging in old lesions. Lesions present elsewhere on face, ears, and hands.

5. Syphilitic alopecia, keratosis pilaris.

Treatment can be directed only toward arrest of baldness, since that which is present is permanent. It is generally agreed that the earlier treatment is begun, the better the results.

Topical measures include manual epilation of diseased margin hairs; the use of antibacterial, antifungal, and stimulating ointments, paints, and lotions, including ammoniated mercury, Quinolol,[®] sulfur, salicylic acid, resorcinol, cade, or the broad spectrum antibiotics; and adequate but not overstimulation of the scalp. Temporary X-ray epilation has proved helpful in some cases.

Systemic treatment should include trial of the broad spectrum antibiotics and general measures conducive to good health.

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A Survey of the Reading and Working Distance of Presbyopes

ROBERT L. CANNON, M.D., GALESBURG

This is a survey of the distance at which presbyopes and prepresbyopes tend to hold their reading material and to do their near work. Fourteen inches, or thirty-five centimeters, has been the historical distance for testing near vision, but it doesn't take long for the neophyte refractionist to recognize that this distance is too close, and is, therefore, impractical for testing the presbyopic patient.

Early textbooks advised fairly short reading distances and strong adds. Thorington¹ (1910) recommended that reading, writing, and sewing be done at 13 inches, or 33 centimeters. Hart-ridge² (1901) stated that the best reading distance is 30-40 cm. Tscherning³ (1904) fixed his working distances at 13 inches.

Several current textbooks on refraction were found to be vague regarding the working and reading distance of the presbyopic patient. These texts all recommended that the reading addition be adjusted to the working distance, but no standards were given and no methods of determining the distance were suggested.

Many standard eye examination forms specify that near vision should be tested at 14 inches. This distance also was used to set the percentages of near vision efficiency and loss by the Committee for the Council of Industrial Health of the American Medical Association. In their report titled "Estimation of Loss of Visual Efficiency"⁴, they state "A visual acuity of 20/20 or better . . . is considered 100% acuity for distance vision and Snellen 14/14, Jaeger 1, or 3-point type (with presbyopic correction if necessary) is considered 100% acuity for near vision (14 inches or 36 cm.)."

Many near vision test charts such as Dr. Lebensohn's⁵ comprehensive and handy plastic covered cards and the A.M.A. cards are designed for use at 14 inches.

A recent book by Holmes⁶ listed the average working distances of people in several hundred occupations. For housewives, secretaries, attorneys, proofreaders, and editors, he gave averages of 16 to 18 inches. He states, "Most refractionists in America take nearpoint findings and prescribe general purpose bifocals for reading at 16 inches." This is more realistic than the traditional 14 inches.

One of my early instructors in refraction, Dr. John Beall, used and taught me the method that was used to make the measurements for this survey. It is as follows: If the patient wears glasses, they are removed so that the present correction will not influence the placement of the printed matter. He is then handed a magazine and instructed to hold it at the place that he likes to hold his books, magazines, or newspapers. Most patients, without further instruction, confidently and naturally hold the magazine at the distance they prefer. Occasionally a patient will say "But, Doctor, I can't see anything on this without my glasses." He is then told that he is not supposed to see the printing, but is to hold the magazine at the distance that feels comfortable and natural. After the patient has placed the magazine, a metal tape measure is held up with the zero mark at the lateral canthus. The tape is rolled out and an arc is swung so as to touch the magazine. The distance from the lateral canthus to the reading position is observed and recorded either in inches or centimeters.

Experience has shown that this distance seems to be fairly constant for each individual because rechecks made after short intervals of time or even after several years are surprisingly similar.

Thus it seems that persons in the presbyopic age group develop a habit of holding their reading material or other close work at a certain distance. This customary distance possibly is influenced somewhat by their anatomical build, the nature of their work, and their posture when

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reading. An analysis of the working distances involved in their job, profession, or hobby may be helpful in deciding whether to prescribe multifocal lenses or a special extra pair of glasses. But usually there seems to be one optimum distance which they will seek either by positioning their head to the work or by bringing the work to that distance.

Originally 300 consecutive records were taken from our files for the purpose of this survey, but tabulations showed that there were 235 women and only 65 men in the group. Because of this lopsided sex distribution, 150 consecutive records for men and 150 consecutive records for women were used. Only the records of patients over 40 years of age were included.

The range of the 150 men was from 35 to 55 centimeters, or 14 to 25 inches with an average distance of 47 centimeters, or 18.8 inches. The range of the 150 women was from 29 to 56 centimeters, or 11.6 to 22.4 inches with an average of 43.8 centimeters, or 17.5 inches. The average reading distance for the total of 300 patients, both men and women, was 45.4 centimeters, or 18.1 inches.

The men in this survey held their reading material 4.8 inches farther away than the usually recognized distance of 14 inches and 1.3 inches farther away than do women. Women held their reading material 3.5 inches farther away than 14 inches. The average of the whole group of 18.1 inches is 4.1 inches farther out than the 14 inch distance.

What are the most preferred reading distances of the presbyopic patients? After using this method of measurement of the near working distance for 10 years, it seemed that the most popular distances designated by the patients were 42 and 45 cm. Tabulation of the statistics showed this to be the case. A breakdown of the figures is as follows:

Distances	Number	Percentage
40 cm. or less	19	6.3%
42	54	18.0%
45	63	21.0%
48	27	9.0%
50	41	13.6%
over 50	23	7.6%

The less common measurements of 41, 43, 44, 47, and 49 centimeters accounted for the other 24 per cent.

As anticipated, the preferred distances used were 42 centimeters, or 16.8 inches and 45 centimeters, or 18 inches. The third most common distance was 50 centimeters, or 20 inches.

Next, comparisons of the working distances of the various decades of age of the 300 patients were made and the results were as follows:

Ages	Number of Patients	Average Distances
40-49	99	45.8 cm., or 18.3 in.
50-59	89	46.5 cm., or 18.6 in.
60-69	67	45.3 cm., or 18.1 in.
70-79	39	42.4 cm., or 17 in.
80-89	4	38.7 cm., or 15.4 in.
90-93	2	37.5 cm., or 15 in.

As would be expected, people over 70 tend to pull their reading material in closer, while those in the 40's, 50's and 60's show an average distance over 18 inches, or 4 inches over 14 inches. The small number of patients in their 80's and 90's could not be considered a sufficient sample for drawing any conclusions.

DISCUSSION

From a practical standpoint, the method of determining the reading distance as described above has been successful and reliable. It is more sensible to let the patient pick the reading distance than to focus the reading add at 14 inches and select the power of the bifocal from an accommodation table according to the age. We have all heard it said that the younger the refractionist, the stronger the add. It is easy to see why this would be true if the novice started focusing his patient's reading adds at 14 inches. He would soon find this is too close.

If a trial frame and trial lenses are used in the refraction, the patient can hold the near vision chart where he pleases and the reading add can be adjusted accordingly; however, more and more phoropters are being use in the busy refractionist's office and here it is not practical to have the patient hold the test card so that the reading distance must be predetermined and the reading card set on the near vision slide at that distance.

The increase in the average reading distance to about 18 inches may be due to an increase in the height and size of the general population, or as Lebensohn⁷ has suggested, "A more careful correction of associated astigmatism that has developed in the intevening years has so improved the basic acuity that a weaker add is now adequate." Since a weaker add is more adequate the

patient is able to hold his reading material out farther, have a greater depth of focus, and enjoy more versatility in other tasks for which he uses his presbyopic correction.

Whenever the presbyope's near visual acuity is being determined for reporting percentages of efficiency or of loss, it is not practical to require him to hold the test card at 14 inches because the reading addition in the majority is focused farther out than this. Before presbyopia, the patient is still able to accommodate and the 14 inch distance can be more reliably used.

Standards for near visual efficiency using 14/14 for normal should be reappraised or at least we should take the time and trouble to increase the power of the add sufficiently so that the print will be clearest at 14 inches.

The average distances for men and women as found in this survey are useful in determining the add for mentally ill or deaf patients who are unable to understand the explanation of the procedure.

SUMMARY

Historically, a reading distance of 14 inches has been set but the results of this survey of 300 presbyopes or prepresbyopes showed that the average reading distance of 150 men was 47 cm.

(18.8 inches); 150 women, 43.8 cm. (17.5 inches); and the average of both was 45.4 cm. (18.1 inches).

The most common reading distances used by these 300 patients were 42 centimeters and 45 centimeters, with 18 and 21 per cent respectively. The third most preferred reading distance was 50 centimeters.

The average presbyope up to 70 years of age holds his reading material about 45 centimeters (18 inches) away and as he gets older, he tends gradually to move the material closer in.

511 Bondi Bldg.

I wish to express my appreciation to Rosemary Kennedy, R.N., for her assistance in helping to accumulate the statistics for this study.

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New anatomical material service

Better times, increased welfare provisions, social security, veterans' organizations, and religious groups have so reduced the chances of a person's dying indigent and unclaimed that the necessary supply of anatomical material has become seriously curtailed again.

The best hopes for the future are a continued awareness of the problem and a frankness concerning it, and the maintenance of the good relations that now exist between the schools and the

superintendents of institutions from which the bodies must come. Of equal importance is the revision of inheritance laws, in states where it is necessary, to permit the bequest of one's body, recognizing the right of the individual to dispose of his remains as of his other property. This, and an effective publicity program, has been encouragingly successful in California, where bequeathed bodies are a major source of anatomical material. *Editorial. Melancholy of Anatomy. New England J. Med. Apr. 17, 1958.*

Viruses and Heart Disease

EARL N. SILBER, M.D., CHICAGO

Doctor Robert J. Adolph: Remarkable advances have been made during the past 25 years in the identification of new viruses and in the recognition of human viral disease. Clinical and pathologic studies of heart disease due to viruses, however, have been fragmentary and contradictory. Today, we have asked Dr. Earl N. Silber, who has been actively engaged in such a continuing study at Michael Reese Hospital in Chicago since 1950, to speak to us on this subject.

Dr. Earl N. Silber: It is true that medical opinion in this area is by no means settled. In part, this is because it is virtually impossible for the clinician to make an accurate diagnosis of a viral respiratory infection from symptomatology alone. Moreover, the extended time lapse between the primary infection and the appearance of heart disease obscures cause-effect relationships. In the Michael Reese study, complement-fixation tests for viruses and cold hemagglutinins have been performed on acute and convalescent serum specimens of patients who presented with one of the following features:

(1) Congestive heart failure without a demonstrable etiologic basis for heart disease;

(2) Signs or symptoms of heart disease during or following recovery from an acute infectious disease, either clearly viral in origin or without clinical or laboratory evidence of bacterial or rheumatic origin;

(3) Routine electrocardiograms suggestive of myocarditis.

The demonstration of a fourfold or greater rise of specific antibodies for a particular virus during the course of the illness was accepted as evidence of the etiologic relationship of that virus to the observed disease.

Diagnosis of heart disease due to respiratory viruses was made in 23 patients. Pericarditis was diagnosed in two cases and myocarditis in 21.

Assistant Clinical Professor of Medicine, Chicago Medical School and Physician in Charge of Clinical Teaching and Training of the Cardiovascular Department, Michael Reese Hospital, Chicago.

A specific viral etiology was identified in eight cases. The specific viruses implicated included influenza B in three cases, influenza A in two cases, influenza A and B in one case, psittacosis in one case, and primary atypical pneumonia virus in one case. The other 15 cases were designated as presumptive because they did not meet the aforementioned rigid immunologic criterion of rising antibody titer and in none was another etiologic factor for heart disease demonstrable. It is likely that if immunologic tests for additional viruses had been employed, other specific etiologic agents would have been found.

No spontaneous history of an antecedent respiratory infection was given in 75 per cent of the patients, either because the infection seemed trivial or the interval between the infection and the heart disease was prolonged and the patient could see no temporal relationship. Careful inquiry by the physician with respect to antecedent respiratory infections will identify correctly some cases of postpartal myocarditis, Fiedler's myocarditis, or idiopathic myocarditis as instances of postinfectious myocarditis.

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Two patients presented the clinical picture of idiopathic benign pericarditis with exacerbations and remissions and complete recovery in one month and five months, respectively. Influenza B was implicated in both cases. Influenza has not been reported previously as an etiologic agent in so-called idiopathic pericarditis.

Thirteen patients with myocarditis had an acute clinical course with complete resolution whereas two died after a fulminating course before serologic studies could be performed. Pathologic examination revealed myocarditis consistent with a viral etiology in both cases. Three patients had a subacute course marked by exacerbations and remissions and lasting two months to four years, with eventual recovery. Chronic intractable myocarditis was observed in three patients with eventual death in congestive heart failure in two cases. Specific viral etiologies were implicated in one patient of each of the last two groups, a finding which strongly suggests that viruses may cause irreparable myocardial damage and chronic heart disease.

Congestive heart failure was the major clinical finding of all instances of subacute and chronic myocarditis. Four patients with heart failure were examples of so-called postpartal heart disease following within two months after an uneventful pregnancy and delivery. In two cases, rising antibody titers to combined influenza A and B and to primary atypical pneumonia virus were found.

A valuable clue suggesting the possibility of myocarditis in patients with congestive heart failure, was the occurrence of ectopic rhythms following the administration of relatively small doses of digitalis.

No electrocardiographic pattern characteristic of viral myocarditis was noted. In three cases a left ventricular hypertrophy or strain pattern was the only electrocardiographic abnormality, even after complete clinical recovery, and in the absence of hypertension or radiographic evidence of chamber enlargement. This suggests that spotty focal fibrosis of the myocardium with attendant conduction defects may produce a heart strain pattern *per se*.

Two patients with congestive heart failure and a protracted course had apical diastolic rumbling murmurs suggestive of mitral stenosis, that disappeared with recovery. In neither case was an

accentuated apical first sound or opening snap present. Has the label, rheumatic heart disease, been put upon other cases of viral myocarditis with such murmurs even though they lack a rheumatic history or the confirmatory auscultatory signs of organic mitral stenosis?

Our group has studied 48 unvaccinated student nurses and hospital employees who had serologic evidence of Asiatic influenza. Two had evidence of postinfectious myocarditis, an incidence of eight per cent, which is in excess of that usually described in the literature. One nurse, although asymptomatic, developed first degree atrioventricular block and later a nodal rhythm, with eventual return to normal sinus rhythm.

The local medical commission investigating an Asiatic influenza epidemic in Bombay reported that 20 per cent of patients had electrocardiographic abnormalities and that 13 per cent had changes consistent with myocarditis. However, the criteria for the diagnosis of myocarditis were not enumerated.

Two patients with mitral stenosis, recently described by Burch and associates, developed congestive heart failure following Asiatic influenza infection. One developed pericarditis and myocarditis with no demonstration of a preceding Beta hemolytic streptococcal infection. Burch concluded this was a case of active rheumatic carditis, although the possibility of acute myocarditis due to the influenza virus had not been excluded.

A number of reports in the medical literature describe heart failure appearing in the last month of pregnancy or early puerperium in the absence of any known pre-existing cardiac lesion. Such cases have been called postpartal heart disease. The myocardium in fatal cases often has shown moderate infiltration by lymphocytes and macrophages. There is no evidence that pregnancy *per se* is etiologically related to the heart disease. In 1954, Bashour and Winchell reported two cases that suggested sulfonamide sensitivity as the etiologic agent in one patient, and influenza virus in the other. As previously stated, four of our cases of viral myocarditis were instances of postpartal myocarditis. Other etiologic entities have been suggested. Hence, there is no good evidence to warrant consideration of postpartal heart disease as a specific entity.

Idiopathic ventricular hypertrophy is an uncommonly described pathologic condition with

histologic evidence of hypertrophied muscle fibers and some replacement fibrosis. This is a non-specific end-stage picture of myocardial disease. Our experience has led us to conclude that in many cases, idiopathic cardiac hypertrophy probably represents a chronic viral myocarditis.

Virchow and Rokitansky were of the opinion that myocardial fibrosis was a sequel to inflammation. Hence, the diagnosis of chronic myocarditis frequently was employed. After Herrick's description of myocardial infarction, the relationship of coronary artery disease to myocardial fibrosis was recognized and the diagnosis of chronic myocarditis was restricted to rheumatic and diphtheritic carditis. Nevertheless, it has been established that chronic myocarditis of other etiologies exists although the antemortem diagnosis admittedly is difficult. We recently have observed four such patients. Two masqueraded as mitral stenosis. Cardiotomy on one of them revealed a normal mitral valve. Autopsy subsequently disclosed chronic myocarditis perniciosa (Boiken) in both cases. A third patient at 73 had a typical episode of flu and six weeks later entered the hospital in congestive heart failure. The electrocardiogram revealed a left bundle branch block. After four years of chronic cardiac disability, this patient died in intractable heart failure. Normal coronary arteries were found

at autopsy but the patient had chronic myocarditis. The fourth patient had a similar but shorter clinical course with necropsy findings of chronic myocarditis.

A word of caution in the interpretation of data such as ours is in order. The finding of antibodies for a virus during the course of a disease is highly suggestive but not incontrovertible evidence that the virus caused the disease. Human autopsy and biopsy material for virus tissue culture studies seldom are available. The poliomyelitis virus actually has been isolated from the heart at necropsy, but finding a virus in the myocardium does not necessarily prove that it is responsible for the pathologic picture. It may represent only the consequences of a viremia. Moreover, it is not known whether a virus need be present in the tissues of the heart to induce myocardial lesions. These and many more questions remain for future studies to elucidate.

The major purpose of this paper is to renew the clinicians' interest in the problem. Careful follow-up studies encompassing many years and carried out by the practicing physician who sees patients when they are in acute stages of common infectious diseases is perhaps the best way to assess finally the role of respiratory viruses as agents of heart disease.

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James Nevins Hyde—

Pioneer Teacher of Dermatology in Chicago

SAMUEL J. ZAKON, M.D., CHICAGO

IN THE history of dermatology in Chicago, as in the history of dermatology in America, the year 1870 constitutes a dividing line separating, two eras. On the one hand, the embryonic period of American dermatology and on the other, the new era—the birth, growth, and maturity of the American school of dermatology. The year 1870 saw the appearance of the American Journal of Syphilis and Dermatology. It was the year in which James C. White was awarded the first chair of dermatology in an American medical college (Harvard) and in which James Nevins Hyde began to practice dermatology in Chicago. This was a practice of love and labor lasting 40 years and earned for Dr. Hyde the title of founder of the Chicago school of dermatology.

James Nevins Hyde (1840-1910) was born in Norwich, Connecticut. He prepared for college at Phillips Academy in Andover, Massachusetts and entered Yale. He ranked high in college and received a prize in composition in his sophomore year as well as an award for a poem. He seems to have had a poetic leaning and his "Parting Ode," written for Presentation Day, has been cherished and remembered for its beauty of form and general excellence; again in 1896, on the 35th anniversary of his graduation he contributed a fine lengthy poem entitled "The Ivy of Sixty-One." He received the degree of A. B. from Yale in 1861 and an A. M. in 1865.

Immediately after his graduation from Yale in 1861 he began the study of medicine in the College of Physicians and Surgeons, New York, with Dr. William H. Draper (1830-1901) as his preceptor. In the following summer, we find Hyde helping transfer the sick and wounded of McClellan's army to northern parts, during the Peninsular campaign, and caring for the wounded in the battles of Malvern Hill and Fair Oaks.

He spent 10 months in the autumn and winter of 1862-63 working in Washington hospitals and in July of 1863 was appointed acting assistant surgeon of volunteers and ordered to the North Atlantic Blockading Squadron, where he served on several vessels. He was then put in charge of the Naval Hospital at Newberne, North Carolina. He obtained his commission as assistant surgeon in the regular navy in October of 1863 and was assigned to the San Jacinto and cruised in the Gulf of Mexico during 1864.

While on hospital duty at Key West, Florida, an epidemic of yellow fever occurred in which his two superior officers died, leaving him in charge. His prowess in fighting the disease was so great he was the recipient of a special letter of appreciation from the Secretary of the Navy. In the autumn of 1865 President Lincoln honored him with a commission to join the Ticonderoga of the European Squadron under Admiral Farragut on its memorable voyage to various European ports and through the Mediterranean. During this voyage, he employed his time to good medical advantage in the countries visited. Returning in 1867, he was made past assistant surgeon and served for one year in the Clare Naval Hospital in Washington. He resigned from the navy in 1868 and, after taking the second course of medical lectures at the University of Pennsylvania, received his M. D. degree from that school in 1869.

From 1869 until his death Dr. Hyde practiced dermatology in Chicago, a specialty in which he was one of the pioneers. His first medical school appointment was lecturer on dermatology in the Rush Medical College in 1873, a position he held until 1876 when he was made professor of dermatology at Northwestern University medical school. In 1879 he was chosen professor of skin-genitourinary, and venereal diseases in Rush Medical College and this appointment he held until his death. From 1902 to 1910 he was professorial lecturer on dermatology at the Univer-

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Dr. James Nevins Hyde, Dr. Frank Hugh Montgomery and Margaret.

(From The Collection of Hyde Memorabilia of Dr. Hamilton Montgomery)

sity of Chicago. In 1881 he received an ad Eundem degree in medicine from Rush Medical College.

Many other medical honors and appointments came to Dr. Hyde during his 41 years of active professional life in Chicago. He was attending dermatologist at Presbyterian, Michael Reese, Augustana, and Children's Memorial Hospitals and at the Orphan Asylum of the City of Chicago. For many years he was secretary of the Council of Administration of the faculty of Rush Medical College. He was one of the founders of the American Dermatological Association in 1876, the oldest society of its kind in the world. Dr. Hyde was thus in the proud company of James C. White, Louis A. Duhring, George H. Fox, and L. D. Bulkley. He contributed more papers to this association than did any of his fellow members. He flooded everything he did with his energy and enthusiasm. He was one of a small group of valiant spirits who felt that the progress of dermatology in America was dependent on concentration of energy and purpose along definite circumscribed lines. To the great credit of these pioneers, their accomplishments were effected with scanty sympathy often even despite bitter hostility. Dr. Hyde published more than 100 scientific papers, including important studies on pellagra, blastomycosis, and sporotrichosis.

But his best literary effort was his textbook, *Diseases of the Skin*. The first edition appeared in 1883 and the eighth and last in 1909. This textbook immediately became a bestseller and the most widely used textbook of dermatology. It is the only American textbook of dermatology that has been in print in various editions from 1883 to 1954. The 16 editions were printed by the same publishers—Lea Brothers (Lea & Febiger).

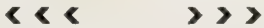
Dr. Hyde was fortunate in the selection of his associates and assistants. His first office associate was Frank Hugh Montgomery [1892]. This association was founded on mutual appreciation, respect, and affection and as time went on, these bonds became more binding. By 1908, at the time of Montgomery's death, Hyde treated him as a son. The 4th, 5th, 6th, and 7th editions of Hyde's textbook were under the authorship of Hyde and Montgomery. Ormsby was another fortunate selection as office associate, for he carried on from 1910 to 1954 the tradition established by Hyde of teacher, author, and clinician.

Dr. Hyde was a charter member and twice President of the American Dermatological Association, was the founder and a charter member of the Chicago Dermatological Society, and its president in 1902-1903 and in 1908.

On July 31, 1872 Hyde was married to Alice Louise Griswold of Chicago and had two sons, Charles Cheney Hyde an attorney and at one time Professor of International law at Northwestern University, and a child of his old age James Nevins Hyde, Jr. born in 1909. Dr. Hyde died September 6, 1910 at age 70.

We are meeting here today as members of the Illinois Medical Society Section on Dermatology. Let us pause for a moment and pay tribute to the one who in the past laid the foundation of our specialty for us. At the same time let us not forget that there is a future and that the future will be what we make it. Historical recording and research is an expression of gratitude to our progenitors and to all those who have enriched our specialty and have thus given meaning, purposefulness, and integrity to our very being. *Remember the days of old, Consider the former generations*

Moses, Deutr 32:7



Trace Elements in Cardiovascular Disease

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When we first undertook the study of trace metal concentrations in cardiovascular and related tissues in the early 1950s, we were convinced that in the metals we had a tool that would permit us to diagnose and treat pathologic conditions long before they had advanced to the point where they could be detected by means of slide and microscope. Developments have been even more rapid than we envisioned, and evidence is mounting that metals hold the key to an entirely new dimension of medical investigation that one day may enable the clinician to treat disease with the exactness expected of the chemist or the physicist.

To understand the role of metals and metal-like substances, we must think in terms of enzymes and enzyme systems. These concepts are entirely foreign to most clinicians whose biochemistry may be a little rusty—quite understandably. Also, we must take into account the vitamins and hormones which also are known to interact with trace metals. An enzyme is a protein, differing from other proteins only in its ability to catalyze profound metabolic reactions within the tissues. Metals enter into these reactions in either of two ways: (1) the enzyme itself may contain a metal as an indispensable part of the molecule: Cell respiration, for example, depends heavily upon the presence of a metalloenzyme, as these metal-containing enzymes are termed. Illustrative of this class of enzymes is the group of iron oxidases, the chief of which belong to the cytochrome system. (2) At times the metal is not an integral part of the enzyme molecule but merely interacts with the enzyme in catalysis. Often an enzyme is empowered to bring about either of these two reactions: the presence of a metal that can be utilized as part of the enzyme system may then be a deciding factor, determining which of the alternative reac-

tions will occur. In some cases, the reaction is specific and only a certain metal or mealloid can be utilized as a part of the enzyme system. For other enzyme systems, almost any bivalent metal will suffice.

In addition to their importance in enzymic activity, certain of the metals also enter into or influence hormone and vitamin action and, reciprocally, the metal content of the tissues is influenced by the hormones and by the presence or insufficiency of vitamins. The effectiveness of metals in such minute quantities, their interaction with enzymes and hormones, and the profound metabolic changes resulting from deficiency, toxicity, or imbalance of trace metals all suggest analogy to the vitamins.

Disability and death follow the formation of cholesterol-rich, atheromatous plaques in vital areas, blocking the nutrition of cardiovascular and related tissues. We have evidence that the metals are involved intimately in fatty acid metabolism. For example, Curran¹ has shown that in rats chromium increases by 150 per cent the incorporation of C¹⁴-labeled acetate into cholesterol and fatty acids. Manganese, long recognized as a lipotropic agent, increases cholesterol synthesis by 125 per cent, while vanadium decreases synthesis by 90 per cent. In the rabbit, ingestion of vanadium has been shown to lower cholesterol deposit in the aorta without producing an appreciable change in serum cholesterol.² The introduction of the chelator 8-hydroxyquinoline decreases cholesterol and fatty acid synthesis, suggesting that various metals are mobilized or removed by the metal-binding agent. When we subjected cardiac tissues obtained at necropsy to spectrographic and microchemical analysis, we found manganese levels markedly reduced in areas of fresh myocardial infarction.

We are learning more and more about the roles of ions other than sodium in the pathogenesis and control of congestive failure. In the clinic conducted at the Los Angeles County Hospital, we have maintained patients free from significant renal disease for months or years on moderate or massive doses of organomercurials with-

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While the Nutrition Committee of the Chicago Heart Association is sponsoring this article, the opinions expressed are those of the authors and do not necessarily represent the official view of that committee.

out injury to kidney function, provided neither oliguria nor hyponatremia is present. Analysis of the kidney tissue from 45 patients with congestive failure showed an increase of mercury deposit in the kidney with continued administration but gave no evidence of interference with kidney function. Nonprotein-nitrogen values for these patients could not be interpreted as indicating that the larger amounts of mercury in the tissues were harmful.

Less well known is the method of action of carbonic anhydrase inhibitors. Here, too, a metal is of primary importance, for carbonic anhydrase inhibitors work by blocking the action of zinc, the metal which is an indispensable part of the carbonic anhydrase molecule. Removal of the zinc results in irreversible inactivation of the metal-enzyme; reversible inactivation is effected by enzyme inhibitors which combine with zinc, such as dimercaprol, cyanide, sulfide, azide, and the sulfonamides.³ Because zinc concentration determines the rate of insulin release from the beta cells of the pancreas, we tend to think of zinc primarily in connection with diabetes. Nine of 11 patients with diabetes mellitus included in our studies had low cardiac zinc values.

Schroeder and Perry⁴ have pioneered in elucidating the roles of the trace metals in arterial hypertension. After the discovery that hydralazine, an antihypertensive agent, selectively binds manganese, ferrous iron, copper, silver, tin, and mercury, and that hydralazine is oxidized with the liberation of nitrogen by vanadium and ferric iron, these investigators tested a number of chelating and metal-binding agents and found that several would lower arterial hypertension. They then analyzed the chemical structures of antihypertensive agents now in use or undergoing clinical trial and found that many apparently dissimilar substances—none of which act on the autonomic nerves—had the common property of binding trace metals. Increased amounts of cadmium, lead, and manganese are found in the urine of patients with malignant hypertension. This suggests that these metals may be present in hypertensive patients in abnormally large amounts. As might have been predicted, when hypertensive patients are treated with agents such as hydralazine, high urinary levels of these metals drop toward normal. Excretion of one metal, vanadium, is considerably less in hypertensive patients than in normal

persons. Only after a large series of cases has been studied thoroughly, will it be possible to determine the role of metalloenzyme imbalance in arterial hypertension and to apportion with certainty the contribution of each trace metal to that imbalance.

The interdigitation of trace metals in the nutrition and metabolism of the body is extremely complex, as relationships of other trace metals to molybdenum serve to illustrate. Most investigators have been aware for some time of the antagonism between copper and molybdenum, especially in animal nutrition. Copper deficiency in cattle may be due either to low copper concentration of pasture grasses or to its high molybdenum content. However, a third factor enters into the situation and perhaps a fourth: The degree of molybdenum suppression of copper depends on the amount of inorganic sulfate in the diet, and the combined inhibitory effect of the molybdenum and the sulfate on copper utilization seems to depend upon the amount of manganese available. High manganese content will block the molybdenum-sulfate suppression of copper storage and utilization. Here again we must add a further qualification: If the diet is very high in protein, manganese may augment rather than block the effects of molybdenum and sulfur on copper utilization.

For at least one trace metal, cobalt, the method of administration may be of significance. In cholesterol-fed rabbits and chickens, feeding of cobaltous chloride reduces the incidence and severity of aortic atheromatous lesions and lowers blood cholesterol concentrations. Parenterally administered cobalt, however, increases both the incidence and severity of aortic lesions and the level of cholesterol in the blood.⁵ This finding has important implications in therapy employing vitamin B₁₂.

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Pathogenesis and Treatment of Light Sensitive Dermatoses

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PATHOGENESIS

THE mechanism producing photodermatitis is presumed to be the result of absorption of quanta of energy from light by molecules of photosensitizing chemicals present in the prickle cells of the epidermis. The release of this energy results in chemical changes in the prickle cells, causing dermatitis.¹

Sunburn is the response of the skin to overexposure to ultraviolet waves in the region of the 3,000 Angstrom unit (A) band. The destructive effect of the shorter wave lengths may be due to their greater energy quanta and probably also because protein and nucleic acid absorb light strongly in the action spectrum below 3,300 A, but not appreciably at longer wavelengths.²

Variations in sensitivity to sunlight depend to a great extent upon the thickness of the stratum corneum and epidermis as well as upon pigmentation. The former is of greater importance; these layers thicken in response to exposure to sunlight. The keratin flakes diffuse or scatter the shorter ultraviolet waves and the keratin protein absorbs the light waves.

In light-skinned individuals, the melanin pigment lies mainly in the basal layer, so that it affords little protection against reactions to sunlight that take place in the overlying prickle cell layer. After exposure to light, pigment migrates into the more superficial layers producing so-called suntan which aids in protecting against further damage. Pigment protection is much more effective in dark-skinned individuals.

In addition to the damaging effect (sunburn) of overexposure to ultraviolet light below 3,300 A, various photosensitizing agents may play a role in photodermatitis. To act as a photosensi-

tizer, an agent must be able to absorb light in the action spectrum concerned. Photodynamic action refers to sensitization of tissue by a wide variety of dyes or natural pigments. These sensitized tissues contain chemicals that become oxidized (these reactions do not take place in the absence of oxygen) when light is absorbed and result in chemical changes that cause dermatitis. The photosensitizing agent transfers energy from the absorbed light to the reaction without itself being changed.³

Photosensitivity may be produced by applying to the skin, coal tars, dyes, the sulfonamides, cologne, perfume, citron oil, and bergamot oil. Par-enterally, porphyrins, dyes, barbiturates, sulfonamides, and chlorpromazine may sensitize the skin to sunlight.

The energy acquired by the tissues in absorbing light may be dissipated as thermal energy or expended by secondary radiations. The resultant wavelengths usually are longer than those absorbed. Theoretically, this new secondary radiation could exert additional effects, perhaps involving a sensitizer that would not be expected to react with the shorter wavelength.²

The reactions so far discussed have been called phototoxic reactions—nonallergic phenomena that can be produced at will in humans and animals, provided enough of the drug and proper rays are used.⁴ Photo-allergic reactions occur more uncommonly. This response appears after an incubation period of nine to 10 days. Once a person has become photo-allergic, the reaction can be regularly reproduced within 24 hours.⁴ An antigen-antibody union is necessary to produce this reaction.⁵ Solar urticaria, solar eczema, and prurigo aestivalis are due to allergic mechanisms.

Evidence points to the theory that the allergen in urticaria due to ultraviolet light is a normal metabolite of the skin produced by irradiation.

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The proof is the positive passive transfer test.⁶ Epstein also has produced a positive reverse passive transfer test.⁷ In solar urticaria due only to visible light, positive transfer tests usually are negative. In these cases it is postulated that an abnormal sensitizer is present in the skin.

Fluorescent light may be a cause of light sensitive dermatitis.⁸ The biologically active radiation (2,537 Å) generated within the tube is absorbed by the fluorescent coating and glass wall of the tube. The long waves of ultraviolet light emitted are in the range of 4,000 to 7,000 Å.

TREATMENT

Complete avoidance of sunlight, although a solution to the problem, obviously is impractical. However, a marked reduction in exposure to light is necessary. In addition, topical preparations may be applied to protect the skin by absorbing the light or reflecting it before it reaches the skin.

Opaque powders, such as talc, zinc oxide, and titanium oxide in shake lotions or ointments, offer protection by preventing light rays from reaching the light reactive part of the skin. Heavy coatings are necessary to obtain such an effect.

An effective sun screening agent is 15 per cent para-aminobenzoic acid.⁹ This protects against sunburn rays, but not against the longer ultraviolet light. Lerner¹⁰ recommends for protection against the latter 50,000 units of beta carotene per gm. of base which has an absorption spectrum between 4,000 and 5,000 Å. Protection also may be obtained by the use of carbolated vaseline.¹¹

Tolerance to sunlight can be increased by oral administration of Pyribenzamine® (tripelenamine) and gradually increasing exposure to sunlight.¹² However, untreated areas show no greater resistance to the sun. Thus, it is apparently the physical effect of epidermal thickening and of increased pigmentation, rather than allergic desensitization, that accounts for increased resistance to the sunburn spectrum.

Antimalarials clinically increase tolerance of the skin to ultraviolet light but their effect cannot be entirely explained by their sunscreensing action. Quinacrine best absorbs light rays of 2,500—3,000 Å and to a lesser extent, rays of 4,000—4,600 Å. Chloroquine and hydroxychloro-

quine have similar absorption spectra of 3,100–3,500 Å. Quinacrine gives visible evidence of its deposition in the skin and quantitative measurements have been made of the deposition of all three drugs in the skin and liver.¹³ A combination of all three has been suggested for maximum sunscreensing effect and minimum toxicity.^{13,14} Cahn claims that the antimalarials suppress the abnormal, but not the normal response to ultraviolet light in the sunburn spectrum.¹⁵

Skin tolerance to ultraviolet light also can be increased by taking 8-methoxypsoralen orally. According to Lerner¹⁶ it reduces the erythema response of the skin. Fitzpatrick¹⁷ believes the drug produces protection by augmenting pigmentation.

Strong recommendation has been made by Lamb for the use of hormonal therapy.¹⁸ A change in the sensitivity of the skin to ultraviolet light and even complete cures have been produced by the use of chorionic gonadotrophic hormone in male patients. In the female, testosterone propionate was found to be effective. Estrogens also have been used, but they are apparently less potent.

Efforts should be made to discover and eliminate photosensitizing agents, but in the majority of cases these substances are not identified.

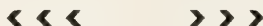
In porphyria, steroids and chelation therapy with BAL (dimercaprol) and Calcium Disodium Versenate®¹⁹ have been recommended.

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The generalized effects of cancer

We are accustomed to think of cancer's acting as a destructive force as a result of direct extension or remote metastases. The effects of cancer which prove lethal include such obvious noxious states as obstruction, hemorrhage, and secondary infection. These are all related to the invasive properties of the neoplasm and are largely mechanical. Other effects, such as anemia or hemolysis, anorexia, and cachexia are not so obvious and have long been a subject for study and speculation. The relationship of certain disease states, such as arthritis, thrombosis and thrombophlebitis, neuritis, acanthosis nigricans, scleroderma, and dermatomyositis to malignant neoplasia raises important questions concerning the chemistry of cancer and the pathogenesis of the associated diseases. A considerable body of evidence exists which would suggest that cancer tissue contains proteins distinct from those present in normal tissue. Moreover, Mann and Welker have shown that certain substances from human tumor tissue are immunologically different from those in normal tissues. The possibility of autosensitization to abnormal cancer proteins with the production of remote manifestations or

peripheral lesions presents itself. In addition, other chemical abnormalities are known in connection with cancer. Certain specific enzyme systems show exaggerated reactions in tumor tissue. These include phosphatases, beta glucuronidase, and aldolase. Enhanced aerobic and anaerobic glycolysis is a uniform finding. Possibilities include not only the production of qualitatively abnormal products by the neoplasm, but also the production of increased amounts of compounds normally produced in the body, such as the excess production of serotonin by functioning carcinoids. Many similar examples could be cited with regard to tumors of endocrine organs. Much work remains to be done in the elucidation of the relationship of chemical abnormalities in cancer to associated disease processes. Clinical evidence that there is more than a fortuitous association is suggested by the increased incidence, the prompt response of the peripheral process to removal of the tumor in some cases, and features characteristic of allergic states in a number of the situations under discussion. *Bernard Straus, M.D. and Mark Straus, M.D. Peripheral Manifestations of Visceral Cancer. New York J. Med. Oct. 1, 1958.*

CASE REPORTS



Achalasia of the Esophagus with Pulsion Diverticulum

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THIS case of achalasia of the esophagus was associated with an extremely large diverticulum of the esophagus.

Sweet¹ describes two types of achalasia of which 80 per cent are of the Type I, characterized by enormous dilatation of the esophagus with an atrophic lower segment; with no pain, spasm, or peristaltic activity. The remaining 20 per cent are of Type II, characterized by moderate dilatation of the esophagus and hypertrophy of the circular muscle layer of the lower segment; substernal pain and spasm occur. X-ray will reveal active but abnormal peristalsis.

In all cases of achalasia, there is destruction of Auerbach's ganglion cells. Just recently, Deloyers, Cordier, and Duprez² produced experimental achalasia in cats by destroying Auerbach's plexus with a 5 per cent solution of phenic acid.

Hawthorne, Frobese, and Nemir³ advocated pylorotomy with the Heller procedure to reduce the amount of regurgitation of acid into the esophagus which often resulted in peptic esophagitis.

Wangensteen⁵ recently advocated a more complete extra mucosal myotomy (Heller) by inserting a Foley balloon-tipped catheter through the

stomach and into the esophageal area of stenosis. With the balloon distended, a more complete myotomy can be accomplished. A routine Heineke-Mikulicz pylorotomy is performed easily at the same time through the abdominal incision.

This 66 year old white male was admitted to Cook County Hospital on 10/24/56. He had noticed a slow onset of emesis of undigested food shortly after eating, increasing over the past six months. At times, the emesis contained food eaten two days previously. He gradually became worse, until at the time of admission only liquids could be taken. He had had no hematemesis, but had noticed a black stool the week prior to admission. He had lost 25 pounds in the past six months and was weak and tired, yet ambulant.

The social history and family history were negative. Past history revealed fractured ribs in 1930 and pneumonia in 1954. Systemic review was negative, except for dizziness two to three weeks prior to his admission.

Physical examination showed a temperature of 97, pulse 92, and respirations of 28. Blood pressure was 106/82. Height 5' 6" and weight 104 pounds. Heart and lungs were negative. The abdomen was scaphoid but otherwise negative. Genitalia were negative. Rectal—stool benzidine one plus.

The patient was placed on a clear liquid diet that later was changed to a soft low residue diet.

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He was given a vitamin preparation each morning.

Laboratory Reports: Hemoglobin, 10/27/56: 60%. Urine negative except for one plus albumin. Chemistries, 10/25/56, NPN 30, total protein 7, alkaline phosphatase 2.3, icterus index 7, cephalin flocculation one plus, thymol turbidity 1.8 gamma globulin 1.14. Chemistries, 10/29/56, calcium 11.1 chlorides 107, sodium 136, potassium 5.1. Serology was negative. The electrocardiogram was normal.

X-rays revealed a density in the left lateral mediastinum in the routine chest films. Gram-cole X-ray and barium enema were negative. The upper gastrointestinal series (Figure 1) was reported as follows: Barium passed readily into the esophagus, filling immediately a large out-pouching in the distal esophagus on the left. There was a constant area of narrowing in the mid-esophagus with moderate dilatation proximal to this area. At the cardioesophageal junction, the esophagus contour was smooth and somewhat narrowed. Only a small amount of barium trickled through into the stomach. At one hour there was 50 per cent retention of barium into the esophagus. At 48 hours, there remained a trace of barium in the esophagus; (Figure 1) impression: (1) Cardiospasm with secondary dilatation of the esophagus, or (2) a large diverticulum with partial obstruction of the esophagus. Esophagoscopy was reported as follows: An essentially normal esophagus was noted until 36 to 39 cm., at which point fluid and barium filled the esophagus. Much time was spent removing this debris after which the scope could be passed to, but not through, the cardia at 45 cm. Impression: epiphrenic diverticula on the left or dilated esophagus secondary to cardiospasm.

The patient did well on a high protein, high carbohydrate, soft diet with vitamins and iron added, and he gained weight slowly. The stools became normal in color and benzidine was negative. Hemoglobin was raised to 98 per cent with proper diet and addition of iron.

On 11/13/56, the patient was taken to surgery and under general anesthesia, in the right lateral position, a lateral thoracic incision was made removing the eighth rib. The inferior pulmonary ligament on the left was incised and the mediastinal pleura opened. The esophagus and diverticulum were exposed, dissected out, and mobilized with tapes placed around the esophagus



Figure 1

above and below the diverticulum. The diverticulum measured 10 x 6 x 6 cm., with a base 7 cm. long. It was located about 5 cm. above the diaphragm. The esophagus above the diverticulum was dilated, but no other diverticuli were seen. The wall of the diverticulum appeared to be a herniation of the mucosa through the muscularis coat. Few muscle fibers were present over the diverticulum. The diverticulum was opened and foul, undigested food particles were aspirated. The wall of the diverticulum measured 3 mm. in thickness and appeared to be only thickened mucosa.

The esophagus was constricted 2 cm. above the diaphragm, which was the level of the achalasia. This constriction was examined by inserting the index finger through the diverticulum opening and distally into the esophagus. It was found that the constriction admitted the index finger with great difficulty and it was extremely tight around it. With the finger through this constricted area, the overlying fibrous appearing muscle fibers were cut in a transverse direction until the esophageal mucosa pouted through, and the constriction around the finger released. The diverticulum was then excised and the mucosa closed longitudinally with interrupted 000 catgut and the muscularis closed with interrupted 000

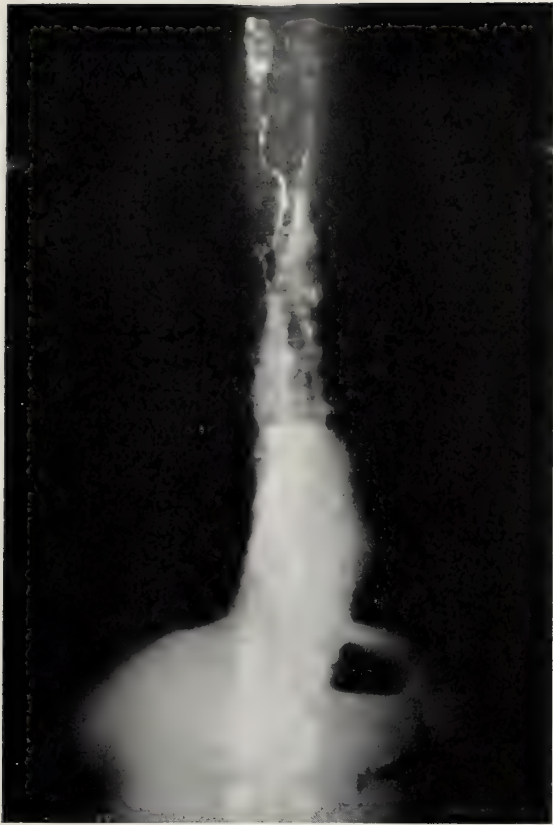


Figure 2

black silk. The mediastinal pleura was left open. The ribs were approximated with doubled #1 catgut, the pleura, intercostal, and chest muscles being closed in layers with continuous O catgut. Continuous 000 black silk was used on the skin. The chest was drained through a #28 French Pezzar catheter through the 10th intercostal space in the posterior axillary line and this was connected to a water-seal. The patient withstood surgery well and received one pint of blood. Postoperatively, he did well.

Microscopic section of the diverticulum revealed intact mucosa with a loss of normal muscularis that was replaced by fibrous connective tissue. The myenteric plexus was not seen in this tissue.

Postoperative barium meal films (Figure 2) taken on 12/5/56 were reported as follows: Barium was seen to pass through the esophagus and enter the stomach without evidence of hesitation or delay. Two slight outpouchings are still present, the one below to the left and the other above to the right. No area of persistent narrowing was noted in the middle or upper third of the esophagus.

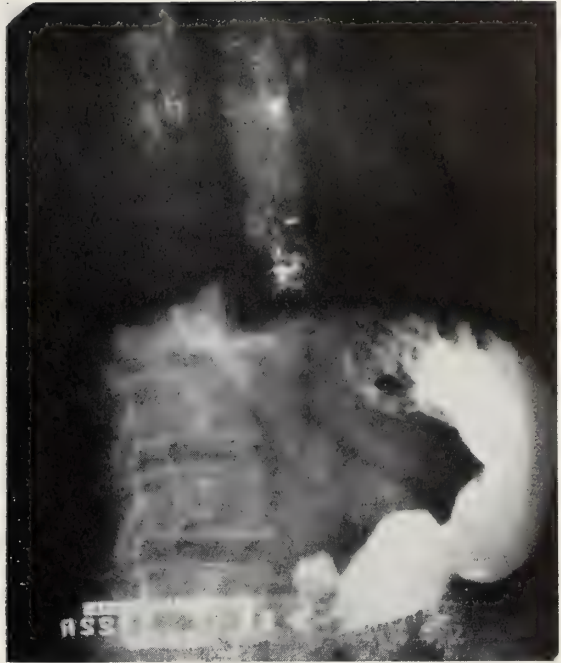


Figure 3

The patient was examined 11 months following surgery and at that time had gained 34 pounds. He had no complaints, was eating all types of food, and had not vomited since surgery. A repeat barium meal was done on 8/26/57 (Figure 3). There were some barium flecks along the esophageal wall at the site of the diverticulum, but the barium readily filled the stomach and upper intestinal tract.

SUMMARY

This 66 year old man entered the hospital complaining of loss of weight and vomiting of undigested food. He had noticed a black stool but had not complained of poststernal pain or other discomfort. He was prepared for surgery and through a thoracotomy incision at the level of the 8th rib on the right side, the esophageal wall was freed from the surrounding structures and the diverticulum opened. Weakness of the wall was associated with extreme cardiospasm and narrowing of the cardiac opening of the stomach. This resulted in the formation of a large pulsion diverticulum of the lower portion of the esophagus. The patient is being followed up in the outpatient dispensary, and if subsequent dilatation of the cardia is indicated it can be done readily.

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Postcoronary Complication

Simulating an Acute Abdominal Crisis

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WHEN a patient with recent myocardial infarction presents the clinical picture of a sudden abdominal catastrophe, a difficult diagnostic and therapeutic problem is presented. Primary intra-abdominal pathology, the arteriosclerotic process⁴, myocardial infarction^{2,3,7,12} and its therapy, particularly anticoagulant¹³, must be considered. Mesenteric thrombosis, overt or incipient^{8,14}, often is a factor, and the acute abdomen often is simulated by medical conditions^{6,10,11}, especially congestive heart failure¹⁵ and pulmonary thrombosis¹⁸. Great care and judgment must be exercised before exploratory laparotomy⁵.

When the following case was encountered, it reminded us of one seen some years ago in which an acute abdominal emergency was simulated by rupture of a recently infarcted myocardium. Knowledge of both warrant speculation upon the mechanism of acute abdominal pain, especially since review of the literature reveals no exact parallel.

A 59 year old white man was re-admitted to the hospital on March 19, 1958 because of severe abdominal pain. His history included a chronic

intermittent cough for about 20 years, and a "heart attack" 31½ years previously. Twenty-five days prior to the present admission, he was hospitalized because of acute myocardial infarction. After an uneventful hospital stay, he was discharged and remained well at home until the day before admission, when—after eating a bowl of soup—he vomited and experienced severe epigastric pain. Pain was relieved somewhat after vomiting and lying quietly. He took no medications, and slept poorly because of pain. The following morning his breakfast was interrupted by emesis and increased abdominal pain that was relieved by an enema. However, by evening, distress mounted in intensity and he was hospitalized. He denied melena, chest pain, dyspnea, or past history of ulcer.

Examination revealed an acutely ill man, weighing 70 kg., complaining of severe abdominal pain. Blood pressure was 124/82, temperature 97.2 F., pulse 70, respirations 20. Complete physical examination revealed no significant abnormalities except exquisite epigastric tenderness and bilateral, healed, herniorrhaphy scars that were not tender. The abdomen was moderately rigid. The lungs were clear and there was no evidence of congestive failure. On admission, bowel sounds were present but later they were absent. An hour later there was slight distention and board-like rigidity with marked tenderness,

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particularly in the upper portion of the abdomen. Rectal examination revealed no tenderness or masses, but moderate prostatic hypertrophy was present. The stool was brown and well-formed. The impression was that of an acute surgical abdomen, probably due to a perforated peptic ulcer.

Admission blood count revealed 12,100 wbc, 3 eos, 3 stabs, 76 segs, 10 lymphs, 8 monos, prothrombin time (Quick), 15.5 seconds or 46.5% (patient was discharged with a prothrombin time of 50% eight days previously, having been on Warfarin); sed rate (Wintrobe), 10 mm., hemoglobin 15.3 gm., hematocrit, 48%. Urinalysis revealed specific gravity, 1.012; albumin, 2 plus; acetone, trace; sugar, negative; and microscopic showed normal sediment. Serum amylase, 87; VDRL, negative; chest X-ray normal; abdominal X-rays showed no free air or abnormality. Electrocardiogram revealed waning phase of recent, large, transmural infarction over the anterior wall of the left ventricle with no change from the previous electrocardiograms.

Laparotomy performed a few hours after admission under local and field-block anesthesia, supplemented with small doses of I.V. Pentothal®[®], revealed no perforations. The wall of the distal portion of the duodenum and jejunum, several inches distal to the ligament of Treitz, was thickened, cyanotic, but viable. A group of dark masses was noted in the mesenteric leaf of the jejunum, the largest measuring 3 x 1 cm. One mass resembling an old thrombus was removed. Resection was not attempted because of the patient's precarious condition, but the celiac and superior mesenteric plexuses were injected with procaine before closing the abdomen. Postoperative diagnosis was infarction of the third and fourth parts of the duodenum and proximal several inches of the jejunum due to emboli, and localized thrombosis within the mesenteric vessels.

COURSE AND TREATMENT

The patient received supportive therapy, anticoagulants, vasodilators, and analgesics every four hours. Electrocardiogram revealed no change from that on admission except that the T waves were less deeply inverted. On the second postoperative day, the patient's abdomen was soft but with rebound tenderness and peristaltic sounds. About 5:00 p.m. the patient be-

gan to complain of chest pain, became dyspneic, cyanotic, and expired that evening.

ANATOMIC DIAGNOSES

Acute hemorrhagic lymphadenitis and thrombosis of the arcuate arteries, and recent, acute, myocardial infarction superimposed on an old myocardial infarction.

COMMENT

The exact cause of acute abdominal pain and physical findings suggesting peritonitis was not disclosed by surgery or necropsy, nor is such a situation unusual^{16,17}. Minute thromboses in the terminal vessels or arcuate arteries may have been the cause⁹. Acute abdominal pain has been described in severe aortic insufficiency, but is extremely rare and of obscure origin. We have seen this type pain and it resembles the picture of acute peritonitis, but lack of progression makes mistaken surgical intervention unlikely. The peritoneal signs accompanying rupture of the heart are confusing, and because of concomitant shock could occasion an ill-advised laparotomy. In the circumstances, decreased cardiac output or failure may well cause physiologic infarction of the bowel.

We do not believe that the mesenteric hemorrhagic adenitis discovered in our case was an adequate cause for the diffuse signs and, obviously, massive mesenteric infarction did not occur. The patient died of coronary heart disease with acute re-infarction of the myocardium due to coronary thrombosis. This was a preterminal event and, therefore, not related directly to abdominal pain or to surgery. The cause of acute abdominal pain resembling peritonitis remains unexplained but, in some way, may be related to the underlying myocardial pathology despite the absence of congestive failure or reduced cardiac output. A patient in the postinfarction period presenting such a clinical picture, should be very carefully evaluated, and if signs persist or progress, surgical intervention is mandatory.

SUMMARY

An episode of acute abdominal pain with clinical peritonitis is presented. No significant, gross intra-abdominal cause was found hence, a direct cardiac cause is postulated, despite the fact that minute thromboses of small mesenteric vessels without infarction could have been the cause. Patients with signs of acute peritonitis in

the postcoronary period, should be very carefully evaluated but not denied surgery, lest a separate and curable intra-abdominal cause of peritonitis be present.

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Behavior relation to mental defects in children

It seldom is possible to predict accurately mental abnormality in a young child on the basis of specific behavior disorders. Simple retardation of development is commoner than disturbed behavior. In regard to mental deficiency it is possible to recognize only severe mental defect at an early stage. Often an adverse social background, not mental defect as such, is the problem. Decisions regarding mental defect often are best postponed. The predictive value of tests under the age of 5 years is very low. A detailed history and physical examination are essential to assessment. Only eight per cent of 233 imbeciles and idiots drew their parents' attention by disturbed behavior. The others were simply

retarded. Disturbed behavior of identical pattern may be found in idiots, in psychotic children, and, transiently, in normal children. The distinction must be based on the general picture, not on individual symptoms. Defectives are responsive to the environment and may develop a psychotic overlay in unfavorable circumstances. Even in severe defect, early accomplishments are sometimes normal for the age. Early assessment and attention are important, especially where there are conditions that can be treated or complications such as deafness, but expediency should not be allowed to precipitate a rash decision that will prejudice the future of the child. *Brian H. Kirman, M.D. Early Disturbance of Behavior in Relation to Mental Defect. Brit. M.J. Nov. 15, 1958.*

Pathology Conferences



Multiple Myeloma

HERBERT M. SOMMERS, M.D., CHICAGO

The patient was a 55 year old, white, male, factory worker who entered the hospital complaining of weight loss, abdominal pain, anorexia, and nausea of several weeks' duration. He apparently had been well until one year before admission when he first noted vague, ill defined pain in the back. Nine months later he noted the onset of weakness that became progressively worse. Two months later an intravenous pyelogram was performed which, although outlining the kidneys, failed to visualize the renal pelvis or ureters. Three or four days before admission he became anorexic and nauseated. There had been a 30 pound weight loss in the preceding two months.

Past history revealed that at age 13 the patient was treated for a congenital hypospadias and associated urethral stricture. There had been no further difficulty with the urinary tract following this incident.

Physical examination revealed the blood pressure to be 138/58 mm. of Hg.; pulse, 96; respirations, 20; temperature 98.6 F. The patient was co-operative, pale, lethargic, and showed evidence of recent weight loss. The optic fundi did not appear unusual. The lungs were normal. There was a normal sinus cardiac rhythm. A grade

III harsh systolic murmur was heard best at the apex, and a grade II aortic systolic murmur radiated to the neck. The liver was palpated 3 cm. below the costal margin in the midclavicular line. No other organs or masses were felt. There was moderate costovertebral tenderness bilaterally. The external genitalia revealed a hypospadias with a stenotic urethral orifice admitting only ureteral catheters. The deep tendon reflexes were equal and active. The superficial abdominal reflexes were absent.

Urinalysis on admission revealed the specific gravity to be 1.010; the pH, -7.5; 700 mg. of albumin; many red blood cells and an occasional white blood cell per high power field. The hemogram revealed 5.1 gm. of hemoglobin with a 16% hematocrit; 5,500 white blood cells per cu. mm. having a normal differential. The fasting blood sugar and alkaline phosphatase determinations were normal. The nonprotein nitrogen was 127 mg.%; creatinine, 15.2 mg.%; and uric acid, 12.3 mg.%. The total serum proteins were 6.0 gm. with 4.8 gm. of albumin. Serum electrolytes taken the day after admission were (in meq. per liter): Sodium - 140; potassium - 6.7; chlorides - 97; carbon dioxide combining power - 22; phosphorus - 6; calcium - 6. The serum cholesterol was 106 mg.% with 71.6% esters. A urine culture revealed *E. coli communis* that was mod-

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erately sensitive to most antibiotics. X-rays of the chest revealed a 25 per cent cardiac enlargement. X-rays of the skull revealed "spotty decalcification of the skull, which is considered insufficient to make a diagnosis of myeloma." X-rays of thoracic and lumbar vertebrae revealed slight, diffuse decalcification without focal destructive lesions. A bone marrow aspiration revealed myeloid hyperplasia with a myeloid-erythroid ratio of 56:1, and 14.5% plasma cells. A tissue block of the same specimen was diagnosed "Portions of blood clot showing plasmacytosis." A congo red test showed 50.8% of the dye remaining in the serum after one hour.

On the third hospital day a meatotomy was performed for the purpose of placing an indwelling catheter in the bladder and accurately measuring urinary output. The urine continued to be of low specific gravity and contained large quantities of protein. The urinary output per 24 hours ranged between 450 and 900 cc. for the remainder of the patient's hospitalization. Tests for Bence-Jones protein were negative. Because urinalyses had revealed large quantities of protein, paper electrophoresis on urine was done and revealed 92.6% of the total protein to have a mobility in the gamma globulin range. Paper electrophoresis on serum was considered to be within normal limits. A total of five blood transfusions were given for the anemia with moderately good results. On the 13th hospital day the 24 hour urine calcium excretion was 37.2 mEq. per liter. On the 18th hospital day, the nonprotein nitrogen had risen to 142 mg.% and the potassium was 6.7 mEq. per liter. Acidosis increased with the serum phosphorus rising to 6.7 and the calcium to 6.3 mEq. per liter. On the 20th hospital day, the blood pressure was 158/52 mm. of Hg. and the pulse 102 per minute. Epistaxis and hematemesis were noted with bloody drainage from a nasogastric tube inserted for the relief of persistent nausea and vomiting. Pulmonary edema and a pericardial friction rub developed on the 24th hospital day. The following day the nonprotein nitrogen was 330 mg.%; creatinine, 54 mg.%; hematocrit, 22%; and the hemoglobin 6.9 gm. per 100 ml. Urine specific gravity was 1.015 with 4+ proteinuria. The temperature remained normal while the pulse varied from 120 to 140. The patient died in pulmonary edema on the 26th hospital day.

MAURICE GORE, M.D.*: This case presents the problem of weight loss, abdominal pain, anorexia, nausea, renal insufficiency without hypertension, azotemia, moderate diffuse decalcification of all bones without specific lesions and bone marrow findings of plasmacytosis. This clinical picture best fits the diagnosis of multiple myeloma. Let us discuss further the diagnosis and differential diagnosis of multiple myeloma.

The patient was a 55 year old, white male who had been ill approximately 14-15 months. Multiple myeloma usually occurs in the fifth decade of life and the incidence in males is approximately twice that of females. The survival period averages 20 months from the time of onset of symptoms but may be shorter. Snapper¹ has reported one case who lived for over 8 years¹. The initial symptom of bone pain is common and frequently is the reason the patient seeks medical attention. Backache is the most common type of bone pain. Weakness, anorexia, and weight loss also are frequent signs and symptoms. All of these features fit this case. Anemia, a common finding, was present, as shown by the admission hematocrit of 16% and 5.18 gm. of hemoglobin. Published reports indicate an average red cell count of 2-4 million and a decrease in the hemoglobin to 6-10 gm. per 100 ml. Leucopenia occurs in approximately 40 per cent of the cases but the white blood count may be normal or increased. Snapper² reported that approximately 20 per cent of cases may have plasma cells in the peripheral blood. The differential count of the peripheral blood smear in this case did not reveal any plasma cells.

Hyperglobulinemia with an increased serum protein is seen in about 60 per cent of cases of myeloma although there may be no alteration in the A/G ratio. Usually the electrophoretic studies of serum show the rise in the gamma globulin range, but peaks also can occur in the beta and alpha globulin range. Frequently an abnormal fraction (M protein) migrating between the beta and gamma globulins is present². In the present case, the A/G ratio showed an actual decline in the globulin portion.

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Paramyloidosis is found in approximately 10 per cent of cases of multiple myeloma and frequently is associated with a normal globulin content of the serum. Deposits of paramyloid usually are found in the mesodermal tissues of the heart, blood vessels, and gastrointestinal tract in contrast to the deposition of amyloid material in the parenchymatous organs as seen in secondary amyloidosis. Secondary amyloidosis takes up congo red much better than paramyloid. In the case we are discussing, the congo red retention was inconclusive, as at least 60 per cent has to be retained to be diagnostic.

Another prominent clinical finding of multiple myeloma seen in this patient is renal insufficiency and proteinuria without hypertension. Azotemia was marked, as evidenced by a near terminal NPN of 330 mg.%. Clinical signs of renal insufficiency in patients with multiple myeloma frequently are correlated morphologically by the presence of large amounts of protein deposits in the renal tubules. At this time perhaps we should review the X-rays. Dr. Cannon, would you please show us the patient's films?

DR. ABRAM CANNON*: The chest film reveals a cardiac enlargement of approximately 20-25 per cent, but is not otherwise remarkable. Skull films show some spotty decalcification of the bones of the calvarial vault. However, these changes are not sufficiently marked to be unequivocally myeloma. Films of the thoracic and lumbar vertebrae show no focal bony destructive lesions, although some decalcification is noted in all the bones visualized. The changes seen are not sufficient to make a diagnosis of myeloma.

DR. GORE: The bone changes in this case were not typical of myeloma, nor could they be considered to be those of metastatic carcinoma. The normal alkaline phosphatase speaks against any neoplastic bone changes or hyperparathyroidism, which one must consider in the differential diagnosis. However, decalcification may be the only bone change noted in myeloma. The patient's serum calcium levels are interesting, in that he showed rather high values throughout his hospitalization. This finding may be present in 50 per cent of cases of myeloma, and when present probably is secondary to reabsorption of bone due to the extension of the myeloma. Serum

phosphorous may be normal or increased; when increased, it commonly is associated with renal insufficiency. Metastatic calcification may then result and occasionally nephrocalcinosis may occur.

Other conditions to consider in the differential diagnosis are: 1) Senile osteoporosis, which is not accompanied by alteration of the serum proteins, shows no Bence-Jones protein in the urine, and exhibits normal blood chemistries. The renal changes and proteinuria in this case favor the diagnosis of multiple myeloma. 2) Chronic glomerulonephritis is another important clinical entity causing severe uremia and proteinuria. The absence of hypertension and typical microscopic urinary findings do not favor this diagnosis. The history of a urethral stricture and hypospadias suggest the possibility of long standing urinary obstruction with ascending pyelonephritis. However, the changes in the bone marrow and urine electrophoretic pattern would place more emphasis on multiple myeloma. 3) Also to be considered in the differential diagnosis are diseases associated with plasmacytosis of the bone marrow. Lupus erythematosus bears no apparent relationship to this case. There is no reason to believe that Boeck's sarcoid has to be given serious consideration. Cirrhosis of the liver, kala azar, and lymphopathia venerea can be dismissed readily.

The final diagnosis is multiple myeloma. Paramyloidosis must be considered seriously because of the normal serum proteins.

DR. WILLIAM HARTZ: What is the relationship between amyloid and paramyloid?

DR. WILLIAM B. WARTMAN*: In primary amyloidosis, deposits of amyloid substance occur in the mesenchymal organs - heart, tongue, medial coat of blood vessels, and the smooth muscle of the gastrointestinal tract; secondary amyloidosis characteristically involves parenchymatous organs, such as the liver, spleen, adrenals, and kidneys. Paramyloid is found in the same distribution as primary amyloidosis and exhibits a variable staining reaction as does primary amyloidosis. This is in contrast with the rather uniform predictable staining pattern seen in secondary amyloidosis with congo red and crystal

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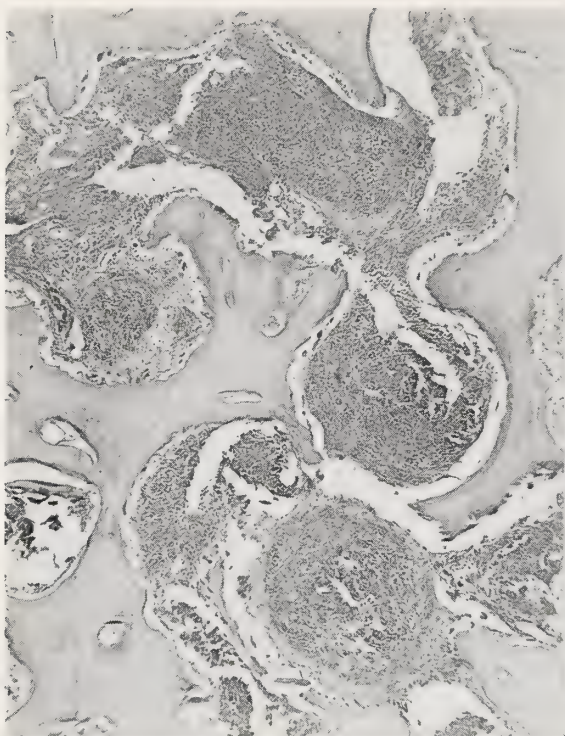


Figure 1 a. Low power photomicrograph of vertebral bone marrow showing diffuse replacement of normal hematopoietic cells.

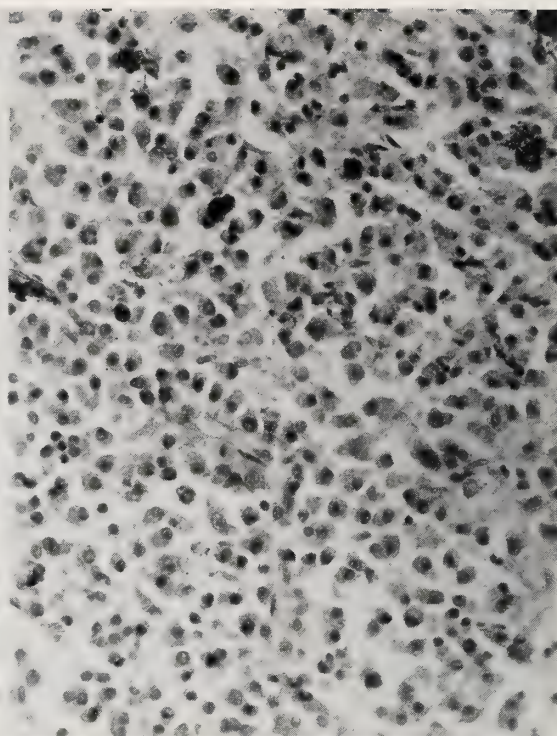


Figure 1 b. High power photomicrograph of (a) showing typical plasma cells.

violet stains. Paramyloidosis seems to be a term reserved for the amyloid seen in association with multiple myeloma, but in itself, has no distinctive characteristics.

DR. FREDERICK LESTINA: What percentage of cases of multiple myeloma in this hospital has shown a positive tests for Bence-Jones proteinuria?

DR. EDWARD FITZSIMONS: Approximately 10-20 per cent.

DR. LESTINA: How many urine specimens were examined for Bence-Jones protein?

DR. WARTMAN: One is recorded on the chart, but I understand Dr. Norman performed at least one other in the house staff laboratory.

DR. LESTINA: Schwartz³ has reported that when urine is examined a single time for the presence of Bence-Jones protein in patients with multiple myeloma that only 20 per cent are found to be positive. This figure rises to about 60 per cent when multiple examinations are done.

DR. RAYMOND LANGENBACH: What is the significance of protein found in the urine by electrophoresis?

DR. FITZSIMONS: This protein had the usual characteristics of a "myeloma" protein—

that is, a narrow, tall peak in the gamma globulin range.

DR. LANGENBACH: Then how would you explain the normal serum electrophoretic pattern in view of the abnormal pattern in the urine?

DR. FITZSIMONS: In a small percentage of cases, the abnormal protein appears only in the urine.

DR. GORE'S DIAGNOSES

- 1.) Multiple myeloma.
- 2.) Paramyloidosis secondary to myeloma.

ANATOMIC DIAGNOSES

- 1.) Multiple myeloma of bone marrow of vertebrae and sternum, with plasma cell infiltration of liver and kidneys.
- 2.) Uremia - postmortem NPN, 435 mg. per 100 ml.
- 3.) Acute cholecystitis.
- 4.) Resolving acute bronchopneumonia, all lobes of right and left lungs.
- 5.) Focal metastatic calcification of lungs, stomach, and gall bladder.

DR. WARTMAN: Dr. Gore is to be congratulated for an accurate and pertinent discussion. At autopsy the bone marrow was diffusely infiltrated with numerous plasma cells (Figure 1).

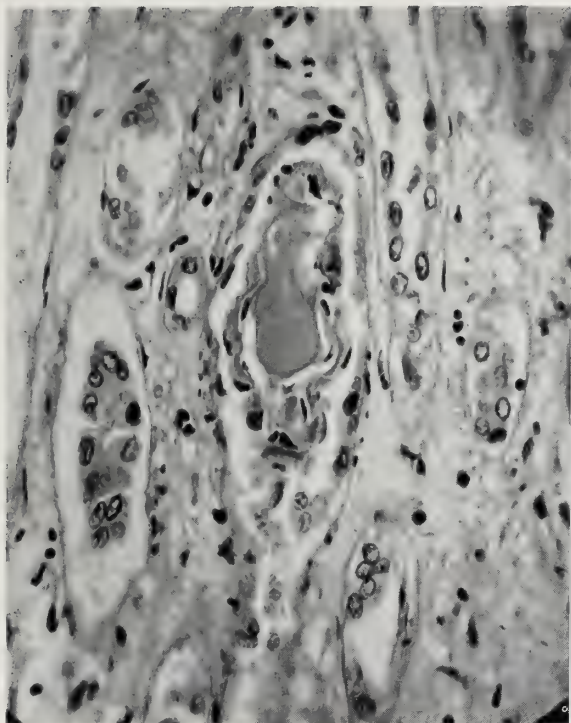


Figure 2. Giant cell in renal tubule surrounding protein.

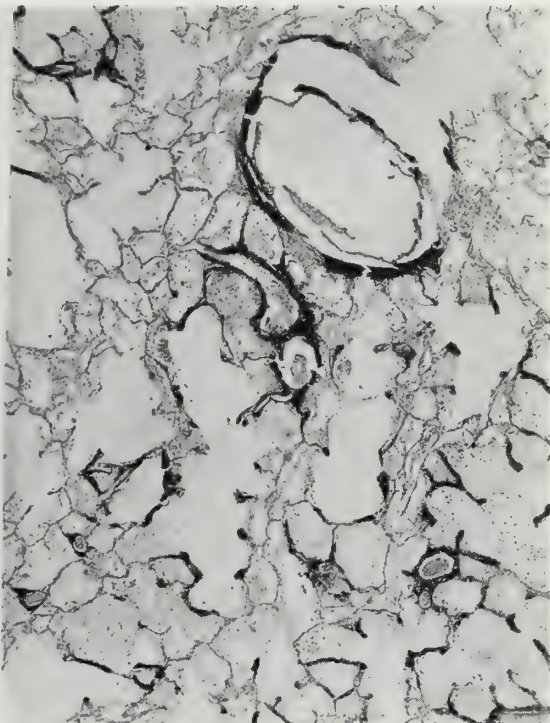


Figure 3. Calcification of vessels and septae in lung.

The kidneys were enlarged and weighed 200 gm. apiece. Rather large focal infiltrates of plasma cells were seen in the cortex, and large amounts of protein were present in the renal tubules, many of which contained multinucleated giant cells surrounding precipitated protein (Figure 2). The liver showed focal areas of periportal infiltration by plasma cells. No evidence of amyloidosis or paramyloidosis could be found. The gall bladder revealed changes of acute inflammation, undoubtedly one of the precipitating factors in the terminal event. Of particular interest was the presence of large areas of metastatic calcification in the lungs, particularly around the medium sized vessels, but also extending out along the alveolar capillaries (Figure 3.) Small foci of calcification also were identified in the wall of the gall bladder, heart, and stomach. Dr. Sommers, would you care to comment in this finding?

DR. SOMMERS: This case has been reported previously from the standpoint of metastatic calcification.⁴ In this instance it was postulated that a combination of renal failure, with resultant phosphorus retention, associated with the myeloma in the bone marrow, causing increased calcium mobilization, resulted in increased dif-

fusable, ionized calcium and phosphorus levels in the body fluids. Because of renal failure, with resulting metabolic acidosis, any sudden shift from the acid toward the alkaline pH, as in the lungs or stomach with the excretion of CO_2 or secretion of HCl , would favor the deposition of insoluble $\text{Ca}_3(\text{PO}_4)_2$ in the tissues at the point where this pH change might appear. In the present case, these factors resulted in rather widespread calcification in the small and medium sized vessels of alveolar septae and interstitial tissues of the lungs. Similar mechanisms probably are responsible for the focal calcification noted in the gastric mucosa, while the acute inflammation with resultant alkaline pH shift would explain the areas of calcification in the gall bladder.

DR. GEORGE CLABAUGH: Were there any glomerular lesions in the kidneys?

DR. WARTMAN: No. Recent work by histochemical techniques⁵ suggests that there may be a slight derangement of the basement membrane of the glomerulus in multiple myeloma. Confirmation of these observations will have to await the more detailed study now available by electron microscopy.

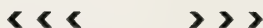
DR. CLABAUGH: How can the marked proteinuria be explained, particularly the rather large amounts of protein in the gamma globulin range having large molecular weights, without significant albumin loss?

DR. FITZSIMONS: Although the protein found in the urine had a mobility similar to that of serum gamma globulin, this does not infer that the two have a similar molecular weight. Mobility in electrophoresis is determined by two factors: size of and charge on the protein particle. If the protein in the urine had a molecular weight less than albumin, but a minimal charge, it could have had a mobility similar to gamma globulin, although the molecular

weights would have varied widely. Another alternative is the possibility that the protein found in the urine is not filtered through the glomerulus but is formed in the renal tubules and then excreted.

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Thrombotic thrombocytopenic purpura

Allergic reactions are well known causes of thrombocytopenia. Drugs frequently are the allergens, and there are now methods for detecting the presence of antibody in the serum of some patients by adding drug and serum to platelet suspensions. In the thrombotic type it was supposed that the platelets clumped to form platelet thrombi in the capillaries, and in this way the platelets were filtered out of the circulation until the circulating platelets were too few to allow for blood clotting. In many cases, the numbers of such thrombi were too few to explain the low

platelet counts; it is probable that the lysis of platelets occurs here just as it does in the usual thrombocytopenic purpura. Furthermore, the lesions in the capillaries do not always look like clumps of platelets.

High power examination of the thrombotic lesions often shows the hyalin-necrotic mass to be covered by endothelium, as though the essential lesions were beneath the endothelium and pushed the latter forward to occlude the lumen. Orbison recently has reconstructed the lesions and showed them to be small aneurysms. The name of the disease is, therefore, a misnomer. *Milton G. Bohrod, M.D. Pathology of Allergic and Collagen Disease. New York J. Med. Oct. 1, 1958.*

Clinical-Surgical Conferences



Thyroid Disease: Surgical or Medical?

*Department of Surgery,
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Moderator:

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Cook County Hospital

Discussants:

LINDON SEED, M.D. Clinical Associate Professor of Surgery,
University of Illinois, and Director Isotope Laboratory,
Augustana Hospital

LEO ZIMMERMAN, M.D. Chairman, Department of Surgery,
Chicago Medical School, and Attending Surgeon,
Cook County Hospital

SHELDON WALDSTEIN, M.D. Department of Medicine,
Cook County Hospital

DR. ROBERT FREEARK: The problem to be discussed today is thyroid disease: Is it a medical or surgical condition? Perhaps we should even include the question, it is a condition best treated by radioactive isotopes? No subject has undergone a greater change with the introduction of isotope techniques than thyroid disease. We have with us today two men whose vast experience in the surgical and isotopic treatment of thyroid disease is certain to increase greatly our understanding of these disorders. Dr. Seed was one of the first in the surgical field to enter into the aspects of radioactive isotopes and their relationship to thyroid disease. He formerly was an attending man at the Cook County Hospital where his technique for thyroidectomy under local anesthesia is still spoken of with great admiration. He is now clinical associate professor of surgery at the University of Illinois College of Medicine, and director of

the Isotope Laboratory at Augustana Hospital. Our other participant in the discussion is Dr. Leo Zimmerman, chairman of the department of surgery of the Chicago Medical School and attending surgeon of Cook County Hospital. His interest and experience in thyroid disease are extensive.

CASE 1. ACUTE, TOXIC, DIFFUSE THYROID DISEASE

DR. PAUL NORA: This 39 year old Negro male was admitted to the medical service of Cook County Hospital on May 21, 1958. He was in a toxic and excited state. He had had a history of 15 pound weight loss, fatigue, palpitation, and tremors of three months' duration. He claimed that his eyes "popped out" and complained of swelling of the legs and shortness of breath on exertion.

Physical examination disclosed a pulse of 132, blood pressure 136/76, respirations 24, and oral

temperature of 102.6° F. There was obvious exophthalmos, and a diffusely enlarged thyroid gland with audible bruit. Neck veins were distended. A gallop cardiac rhythm was present but there was no evidence of systemic or local infection.

The patient was considered to be in thyroid storm and appropriate therapy was instituted. By May 27th his pulse was 80, blood pressure 150/70, temperature 98.6° F., and he was asymptomatic. The basal metabolic rate at this time was +24, and some of his significant laboratory findings are listed below:

Date	NPN	Glucose	Ca	P	Na	K	Cl	BMR	WBC
5-22-58	36	120			145	3.3	104		3,950
5-29-58	26			3.5				+24	6,050
6-10-58			11.3	4.7					
6-11-58								+23	
6-17-58			11.5	3.6					
6-18-58								+14	
6-25-58								- 1	
7-3-58			10.5	4.9					

The patient was further prepared and operated upon one month later. However, before this decision was reached, his case caused much discussion. The question was whether he should have radioactive iodine or surgery. One thing I should mention. He was on Serpasil® and was scheduled for surgery on June 21st. These patients have to be off Serpasil for at least seven days, according to the latest information, so we postponed him for a week. Then subtotal thyroidectomy was performed.

(Slides or photographs of patient shown here) The photographs were taken four days preoperatively. Exophthalmos and diffuse enlargement of the thyroid are obvious.

(Patient shown here) DR. FREEARK: This man is still emotionally labile and does not like crowds, but I want to point out that he weighed 140 pounds before surgery and now weighs 169. He is working on week-ends only. He has no specific complaints. The edema is much reduced but some myxedema of both pretibial areas persists. The patient feels that this edema is less marked than before surgery, and he tells me that his appetite is much better.

DR. SHELDON WALDSTEIN: (Dept of Medicine) This patient presented an extremely severe thyrotoxicosis. The question is raised, What constitutes thyroid storm? This is a matter

of opinion in large part, but over the last few years we have come to feel that an important criterion is elevation of body temperature. I don't think it is necessary to have an elevation to 106° F., which is a classical criterion in some of the textbooks. But fever *per se* is a rather unusual finding in thyrotoxicosis. When a patient presents fever with thyrotoxicosis and there are no ready explanations such as a bacterial complication, and if you think fever is related to the thyrotoxicosis, then this is a major criterion for anticipating the occurrence of storm. There can be severe tachycardia without storm, but when the pulse rate is over 130, be alert to the possibility of storm or borderline storm.

This patient showed considerable mental confusion. In our severe thyrotoxicosis patients we look upon confusion as a very serious complication. Because he had severe exophthalmos and pretibial edema we were alerted to the possibility of a severe thyrotoxicosis. In our experience, pretibial myxedema before definitive therapy or before control is a much more difficult thyrotoxicosis to bring under control. We felt that this was an overt storm and that his condition would deteriorate rapidly without prompt therapy. We instituted, therefore, the classical procedures: intravenous fluids, including sodium iodide, sedation, propylthiouracil, and then the two agents that have changed the entire picture of thyroid storm hydrocortisone and Serpasil. Hydrocortisone has made a major contribution to the survival of patients in thyroid storm. It was administered to this patient intravenously initially, followed by cortisone intramuscularly but not by mouth. Serpasil has an interesting effect in severe thyrotoxicosis or storm; it controls the pulse readily. This patient received 2.5 mg. of reserpine intramuscularly every 6 hours for a few days. This resulted in prompt fall in the severe tachycardia and improved the cardiac function in general. Intramuscular administration is an important adjunct to treatment of this condition because it allows observation of the effect on the eye findings. Lid retraction and lid lag often are ameliorated by reserpine. The patient was given the medication and responded dramatically. In a matter of 36 hours his condition was far less desperate. Temperature then returned to normal and he went on to make steady improvement.

DR. FREEARK: Will you describe for us

what you mean by pretibial myxedema and how is this distinguished from other forms of edema of the lower extremities?

DR. WALDSTEIN: In pretibial myxedema, one sees over the lower one third of the tibia, patches of skin with a brownish appearance or of a purplish hue in the negro. The edges are raised and somewhat stippled; there is induration but no pitting. Sometimes the condition is painful. As this progresses the border extends and enlarges unless the situation is brought under control, which is difficult. We have seen it begin as a small, indurated patch, spreading to involve the entire limb. In this patient, myxedema involved the middle one third of the leg down to the ankle region; it covered the entire anterior area and extended well posteriorly. The margins were raised and the surface discolored.

DR. LINDON SEED: In the days before Lugol's solution we saw many crises or storms, as they are now called, and this is what occurred: We would operate upon a patient in the afternoon and I, as a resident, would make rounds in the evening about 7 p.m. and the patient's condition would be satisfactory. About 11 p.m. the nurse would call me to report that the patient had gone bad. I would find him irrational and with a pulse so fast that it could not be counted, a temperature of 105° F., and an hour later he would be dead. We called this a "crisis." That is what I assume is still a crisis, but we never see them any more. They disappeared the day Lugol's solution was introduced, and this was during my second year of residency, in 1923. The crises disappeared and the mortality rate dropped from 8 to 2 per cent, and I am sure that none of you under the age of 60 years have seen many crises or storms. Lahey introduced the term "storm" in place of "crisis".

This patient had an exophthalmic goiter and was treated with iodine, cortisone, and Serpasil. I have one patient who goes into profound myxedema on Serpasil and I have to give her thyroid and take her off Serpasil to correct it.

I am interested to hear about your treatment of crisis. Heretofore, I have relied entirely on iodine. Here is an exophthalmic goiter of good size. The patient is 39 years of age, and anti-thyroid medication is not good treatment for him. If for no other reason than the pop-eyes, you should not waste time on medicines. If the

thyroid is small exophthalmos absent, and the patient is not disabled, you can try out medical therapy; otherwise surgery or radioactive iodine is indicated.

There is one objection to radioactive iodine and that is the fear of carcinoma in the distant future. This is a hypothetical objection, but some time in the future this patient might develop cancer. If cancer occurs, how big will it be and of what kind will it be? Will it be curable or not? That is not only a hypothetical objection, but it is a hypothetical interpretation of unknown tumors. This man has not developed a tumor so far, but if Dr. Freeark finds a tumor of the thyroid following radioactive isotope therapy, he will be quoted in the surgical literature for age and ages thereafter, and it will be known as Freeark's tumor and from this point on every word he says will be tinged with omniscience.

The argument about radiation producing tumors in children is sound. That evidence cannot be tossed aside lightly. There is some evidence to indicate that if you radiate a baby's neck you will get cancer of thyroid so you cannot dismiss this possibility entirely, and the hypothetical possibility of carcinogenesis becomes a definite objection. Surgeons advocate operations as safer procedures but they do not point out that the patient who is operated upon may die; they do not talk about the surgical complications and other troubles. The patient wants an operation; he thinks that will rid him of the trouble, but that is not true. My office is loaded with people who were operated upon years ago (many by me) and the thyroid has come back. It is, after all, an imperfect operation; it is a good operation but not a perfect one. It has a definite death rate and definite postoperative complications, and these have to be weighed against the results with radioactive iodine. You have to balance up who is going to do the operation, what ward the patient will be on, who is the resident, and how large is the gland. The bigger the thyroid the better it is to operate upon because the large ones do not respond too well to radioactive iodine. These are difficult operations. Most of you boys practice up on nontoxic nodular goiters, but these big glands are difficult. Most patients over the age of 40, those with postoperative recurrence at any age, and those with symptoms but very little goiter are best treated with radioiodine.

This man had exophthalmos. The eye findings in exophthalmic goiter are three in number and may be present alone but usually are associated with each other: puffiness of the lids, staring, and protrusion even to the point of paralysis. The patient may have no exophthalmos preoperatively and develop it postoperatively. It may effect one eye only. Usually after thyroidectomy the eyes improve although the actual protrusion usually persists. If it increases in severity, if vision or function is impaired, the new operation of temporal decompression is fairly satisfactory. It is relatively easy, and if this patient develops diplopia it would not be a bad idea to have it carried out on him.

Now for a discussion of this particular case. If you ask my opinion as to the choice of surgery or radioactive iodine, in this case I would say operate. If he had had no goiter in his neck I would have said to give the iodine because, so long as he does not have much to remove, why not try radioactive iodine? This patient had a big tumor, diffuse in nature, and he was prepared well. I do not see pretibial myxedema very often; usually it is seen postoperatively rather than preoperatively. These cases present thick plaques under the skin which may last for six months or longer and then go away. Do you see them frequently?

DR. WALDSTEIN: Not frequently percentagewise but in a large volume of material we have seen quite a few and we have seen some that do not go away. We had two patients in whom the condition progressed to papillomatous changes.

DR. SEED: I do not see that often.

DR. LEO M. ZIMMERMAN: I have never had one.

QUESTION: What is your experience in diminution in size of the goiter after radioactive iodine therapy?

DR. SEED: With exophthalmic goiter it disappears entirely. We are dealing here with a toxic, diffuse gland and not toxic nodular goiter. You distinguish sharply between those two. I would not treat toxic nodular goiters with radioactive iodine unless I was forced into it and where it is the better course of action. You might do it if the patient is 80 years of age with a bad heart. If you can knock it out with iodine you would be a fool to operate, but a toxic

nodular goiter I would not ordinarily treat with radioactive iodine.

QUESTION: How much will a truly diffuse gland shrink in size?

DR. SEED: It shrinks away entirely; it just disappears. If you give radioactive iodine to cure a goiter you have no palpable goiter left; in fact, you may have no thyroid left. That is the principal disadvantage because you may overdo it. It is a difficult drug to use if you want to have a normal thyroid.

I should not really say that you can cure 100 per cent of the cases with radioactive iodine. There are some patients with exophthalmic goiter who do not have uptake. I had a patient from Dr. Van Hazel who had only one lung; they had put in lipiodol to make a roentgenographic study of the chest and he had no uptake of iodine. Another patient had had lipiodol put in the pelvis in an infertility study, and she had no uptake, but by and large if there is uptake the goiter will disappear. And nobody will have his throat cut if he can drink a glass of water and lose his thyroid. It is true that a child or younger person might live long enough to develop a tumor, but they will have to appear pretty soon to equal the mortality rate from the operation.

DR. ZIMMERMAN: I think Dr. Seed has given a fair discussion of the pros and cons of radioactive isotope therapy as contrasted with surgery. I think his particular Isotope Laboratory is unusual in that it is under the direction of a surgeon because that permits the surgeon an amount of flexibility in thinking regarding these patients. Most of the laboratories are directed by people who have no familiarity with, competence in, or basis of judgment of surgical therapy and it is here that we find an unreasonable decision in the selection of patients for therapy.

I would agree with Dr. Seed that in this particular patient I would choose thyroidectomy as against radioactive isotopes.

As for the complications in the management of hyperthyroidism, it must be remembered that the treatment, whether by surgery or by isotopes, is simply destructive therapy so that whatever occurs as the result of therapy is exactly the same whether that thyroid is destroyed by one means or another. The only exception is the possibility of injury to the recurrent laryngeal

nerves which will not occur with radioactive isotopes but may occur with surgery. But progressive exophthalmos and myxedema or even the possibility that Dr. Seed mentioned of recurrence are just as possible with one form of treatment as the other, depending upon the technique used and the various conditions and imponderables of the patient.

I would like to ask some questions about the myxedema. This is a rather mysterious thing. Myxedema generally is associated with hypothyroidism of a rather severe degree and typically it is a generalized condition. Since the introduction of widespread iodine administration as an antigoiatrogenic agent, the thyroid picture has become more clouded than it used to be. We do not see as many textbook cases of Graves's disease as we used to, and are more and more running into these dissociated syndromes in which there is exophthalmos out of all proportion or cardiac manifestations out of all proportion. Myxedema is classically a manifestation of hypothyroidism. To me it is a puzzling, disconcerting thing. Was there any explanation for this syndrome? I would like to raise a little bit of doubt as to whether this is actually myxedema as we think of it as the result of insufficient thyroid secretion.

DR. WALDSTEIN: First in response to Dr. Seed's comments I would like to say that in our experience we have had more favorable results with radioactive iodine in the treatment of toxic nodular goiter. Myxedema is a complication of radioactive iodine therapy in about six to eight per cent of cases.

I would like to point out to Dr. Zimmerman that not only is damage to the recurrent laryngeal nerves possible in thyroid surgery, but here at Cook County Hospital we have seen hypoparathyroidism, severe hemorrhage into the neck, and we have had to resort to tracheotomy in some cases. None of these things occurs with iodine. Not all the people who operate at this hospital are specialists in thyroid surgery such as Dr. Seed or Dr. Zimmerman or Dr. Lahey or Dr. Crile, but throughout the country most thyroidectomies are done by general surgeons and not by thyroid specialists.

DR. HAROLD B. HALEY: At the American Goiter Association's meeting in San Francisco in June a paper was presented from the Univer-

sity of California describing therapeutic radioactive iodine given to a small number of children in the late 1930's. In this group a fair number have developed nodules and of these, three patients have had the question of carcinoma raised and two of the three they feel are malignant. This has occurred, but it is in the children where we have had other problems of radiation so it is not yet the Freark tumor, but it is interesting to note that it has occurred in children.

CASE 2. THYROIDITIS

DR. JAMES KANE: This 50 year old white female was transferred to the medical service of Cook County Hospital from an outside hospital on May 22, 1958, with the history and findings of a right hemiplegia and aphasia, sustained 12 days earlier. She had been in good health until May 12th, when she complained of being tired and sluggish speech was noted. The history was otherwise uninformative. On admission to this hospital her blood pressure was 180/120, pulse 72. The facies were puffy, eyebrows sparse, voice deep, and tongue large. There was a residual hemiparesis. Palpation of the neck showed the thyroid enlarged generally and nodular, and there was a nodule (estimated weight 30 gm.) in the upper left pole. This was firm and not tender. There were no palpable nodes in the neck. There was a Grade 2 apical systolic murmur. The liver was down one finger, and the spleen was not palpable.

The electrocardiogram showed an infarct with incomplete left bundle branch block. Radioiodine uptake was 0 at first. Hemoglobin was 71 per cent on admission and went to 81 per cent. The white blood cell count was 7,700; urine was negative, Kahn negative. X-rays of the skull were negative, and X-rays of the chest disclosed a large heart. Basal metabolic rates were -5 , -5 , $+11\%$.

Shortly after admission she had a left hemiparesis thought to be another small hemorrhage. This cleared, as did her right generalized paralysis. There was a 10 pound weight loss while she was in the hospital. Her blood pressure remained at 180/120, and it was felt that the mass in the left lobe of the thyroid was enlarging. Radioiodine uptake was repeated and was reported as being 28 per cent. This was on June 7th, at which time a scintogram was reported as showing a nonfunctioning mass attached to the thy-

roid. This was considered to be a cold nodule. There was an increased uptake of ^{131}I after TSH stimulation. These factors were considered as indications for surgery. She was operated upon on July 22nd, with a working diagnosis of carcinoma of the thyroid gland.

DR. FREEARK: The patient was a poor surgical risk. She had had a recent stroke; her cardiac condition was not good. But she had an enlarged left lobe and the isthmus was extremely hard and fixed. At the request of the endocrine team, she was referred to surgery under the belief that it was a carcinoma.

DR. WALDSTEIN: We thought this was a thyroiditis, but the suggestion is made in the literature that in thyroiditis there is no further uptake with TSH stimulation; that this indicates a fully stimulated gland and nothing more. When there was definite uptake here, we revised our thinking and decided it was not thyroiditis. We felt that it was cancer and presumably it had destroyed enough gland to produce myxedema.

DR. ZIMMERMAN: I believe this is an interesting and instructive picture and I will take rather definite objection to the feeling, first of all, that a so-called cold nodule in the neck warrants a diagnosis of carcinoma. One sees that; one hears that, and it is not so. Much has been learned about the thyroid gland in recent years, but also a great deal was learned in the many years before the isotopes were developed. Dr. Seed's experience and Dr. Giles' experience and my experience cover the same period of time. When goiter was a prevalent disease in this part of the country, most of the nodules were degenerating nonfunctioning conditions. We did not have scintograms, but if we had made scintograms of the nontoxic nodular goiters we would have found cold nodules in a large percentage, and yet to some people that spells cancer. But you cannot take these things as simple, single facts; you have to know more about the patient.

This 50 year old woman did not have goiter prophylaxis with iodine. We are told there was a diffuse enlargement and some question of multiple nodularity. That certainly does not speak for a malignant nodule in the thyroid. I believe it is a mistake to take one laboratory finding and base your diagnosis on it. I was told by the director of the Isotope Laboratory at

Michael Reese Hospital that in their experience cold nodules are found in 10 per cent of nodular goiters, and 3 out of the 10 per cent have been found to have cancer. I don't believe that even that kind of statement means anything. The incidence of cold nodules will depend upon the population from which you draw. The more goiter there is, the higher the incidence. The less goiter there is, the greater is the possibility that there may be cancer.

Let us assume that perhaps there is a suspicion of cancer. You have a patient who has high blood pressure and who has had hemiplegia and who, in the hospital and under therapy, had another mild cerebrovascular accident. Suppose this were cancer — then what? Do you think this patient should be subjected to radical thyroid surgery in the circumstances? Simple removal of the gland won't do any good; you have to do a total thyroidectomy and probably a radical dissection of one side of the neck. That is not indicated here even if you think it is cancer. If you palpated nodules in the breast in these circumstances I doubt that you would feel justified in doing radical mastectomy, and yet the thyroid operation is much more extensive than breast surgery.

I would like to comment on the response of the goiter to stimulating doses of TSH. One of the most confusing pictures in the entire subject of thyroid disease is the lymphoid struma because it varies from the extremes of a small, patchy, localized infiltration with lymphocytes to complete replacement of the entire gland by lymphoid tissue. I do not think there is anything unusual about enough functioning tissue being left in a gland to respond to the hormone, even if there is struma lymphomatosis. I do not believe I would have advised surgery in this patient. If it were lymphoid struma, there is no indication. It is not definitely a cancer, and even if it were cancer, what would you do about it in a patient as desperately sick as she is with this cardiovascular picture? I would like to ask Dr. Seed if his reaction is the same.

DR. SEED: I would not have operated upon this woman under any circumstance. There is no evidence that the condition is malignant. I would give her 2 gr. of thyroid and look her over again in a few months. You have to be reasonably sure it is malignant, and then you

have to ask yourself, Is it curable even if I operate? It may be stretching things to say that a scintogram showing a cold nodule does not mean much; if it is a hot nodule it means something. If it does not pick up anything it does not mean a thing. I would much rather feel the neck because these scintograms can be made to show almost anything.

Nodular goiters frequently have hypothyroidism and when they do, the goiter goes away if you give them thyroid. If it does, it is not malignant. The same often is true of thyroiditis and in this case I would have administered thyroid.

DR. ZIMMERMAN: I want to make one more point and that has to do with the relationship of nodular goiters and myxedema. Again the years of observation help one in this respect. I had the privilege one day of visiting a cretin farm in Switzerland, where they had four huge farms devoted to cretins who were so inferior they were public charges. The cretins in those days consisted of two groups: those without thyroids, with aplasia or hypoplasia and no thyroid tissue at all. The others had huge glands that were so large the patients had to hold their chins up. When the professor wanted to show his thyroid surgery techniques to visiting surgeons, he would have some of these people sent down to his hospital. The relationship of nodular goiters to hypothyroidism and myxedema is an old story; there is nothing unusual about it.

DR. WALDSTEIN: I find myself in an interesting position. I am a medical man urging surgery when the surgeons say hands off. I want to say that we have never recommended surgery on the basis of a scintogram alone. This patient had a stony hard, fixed node which we thought was malignant. We recommended surgery to have proof of malignancy because it is conceivable that the reason for her strokes was metastasis, in which case we would have directed our efforts to extensive therapy. This woman has not had a life-long goiter or massive iodine-deficient goiter of the large type, and we think myxedema is unusual in this situation. Our differential diagnosis was not simple nontoxic goiter but thyroiditis with myxedema or possible carcinoma.

DR. FREEARK: I was present at surgery. The gland was enlarged. The entire left lobe and the isthmus was involved. There was no fixation

to the strap muscles. A simple isthmusectomy was done. The impression at surgery was that the condition was chronic thyroiditis, and we have Dr. Novak with us from the Department of Pathology who will tell us more.

DR. GERTRUDE NOVAK: The material which is shown on the screen is a representative section taken from the thyroid gland. The picture was uniform throughout. The normal thyroid appearance of the colloid filled follicles is distorted in that there is little colloid; most of them do not contain any. They are lined by cuboidal cells and are interspersed by many conglomerates of inflammatory cells between them. Most of these are plasma cells. Some lymphocytes were present. It is associated with some fibrosis. This picture adds up to a diagnosis of chronic thyroiditis. There was no pleomorphism. It is not Hashimoto's struma and there were no pseudotubercles.

DR. NORA: What would be the value of a needle biopsy in this case?

DR. SEED: I suppose it would be a good idea.

DR. ZIMMERMAN: Here it would be preferable to thyroidectomy.

DR. NORA: How often do you operate upon thyroiditis to rule out cancer?

DR. SEED: You do it frequently because people push you into it. But when both lobes are hard and it is cancer, you are not going to cure it; you can just satisfy your academic curiosity.

QUESTION: Did I understand Dr. Zimmerman to say that 3 per cent of nodular goiters are cancer?

DR. ZIMMERMAN: No ten per cent of the nodules were cold nodules, and of this 10 per cent, 3 per cent were cancerous. That is not of all the nodules but only of the cold nodules.

DR. SEED: If you want the most amazing statistics there was a report of 1,000 autopsies from the Mayo clinic on patients who had no goiter or thyroid trouble. It was found that 50 per cent of them had thyroid nodules and of these, over 3 per cent were malignant. That means that 2 per cent of all adults in the middle west have cancer of the thyroid and yet there are only 60 persons who die every year in Illinois from cancer of the thyroid.

DR. ROBERT BAKER: Have you seen a

nodule treated with radioactive isotopes that was cancer?

DR. SEED: I have not seen enough of them but I do not know of a hot nodule that was malignant.

DR. WALDSTEIN: One case has been re-

ported.

DR. SEED: Malignant tumors usually are not hormone producing.

DR. FREEARK: I would like to thank the discussants for their informative and entertaining contributions.

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Hepatic physiology

When standard liver function tests show no abnormality, additional investigations may establish the presence of liver disease and enable the liver damage to be estimated quantitatively, especially when progress is being followed. Injected bromsulphthalein (B.S.P.) is cleared from the circulation principally by the liver, and the amount of dye retained 30-45 minutes after the injection has been regarded for many years as a sensitive index of liver function. More recently the estimation of transaminases, which are released into the blood from damaged cells, has been shown to reflect the presence and degree of liver damage. Serum-glutamic-pyruvictransaminase (S.G.P.T.) seems to be more specific for liver damage than serum-glutamicoxalacetic-transaminase (S.G.O.T.); but both tests are affected by cell damage in other viscera, and levels may be high even in obstructive jaundice. Nevertheless, transaminase estimations are likely to prove important additions in most biochemical laboratories, especially as they can also be usefully applied to the diagnosis and management of disease of the heart and other organs. Unlike the B.S.P. test, transaminase estimations are valid in the presence of jaundice, but normal results may be found with both methods in patients with compensated liver disease.

In view of the multiple functions of the liver it is not surprising that a remarkable number of other tests have been devised to reflect various derangements of hepatic metabolism. The majority have been abandoned because of their uncertain relation to the clinical condition, or because of the elaborate techniques that are involved, while others await full evaluation. The increasing availability of isotope techniques has given rise to the combination of rose-bengal with I^{131} , and preliminary studies have shown the expected delay in uptake or excretion in patients with liver disease or obstructive jaundice. Many tests have provided basic physiological data which have been applied usefully to the treatment of disease. This is particularly true of studies by catheterization of the hepatic vein, which are yielding more accurate information than is obtainable with peripheral blood measurements regarding splanchnic blood flow, hepatic oxygen utilization, and the metabolism of proteins and carbohydrates by the liver. This "great, dull bile producer" is now known to perform more complex and vital functions than any other organ, and modern techniques promise that the comparatively scanty information regarding hepatic physiology will rapidly increase. *Editorial. Liver Function. Lancet, Aug. 23, 1958.*



Lung cancer in women

For many years physicians have speculated on what will happen to women after decades of smoking. The following summary appearing in the *Journal of the National Cancer Institute* sheds light on this question:

"In a controlled, retrospective investigation of 158 women with pulmonary carcinomas, the largest and the only statistically significant effects were associated with smoking history. The scale of relative risks by intensity of cigarette use was greater for epidermoid and undifferentiated carcinomas than for adenocarcinomas. For epidermoid and undifferentiated carcinomas all the relative risks, with respect to smoking history and rate of cigarette use, differed significantly from unity at the 0.1 per cent level. The findings agree substantially with those from three other studies of lung cancer in women. The combined results of several investigations suggest that the characteristic excess lung cancer mortality among males almost disappears when nonsmokers are studied, since male nonsmokers have only slightly higher rates than female nonsmokers."

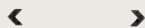
The battle over the etiological relationship of smoking is as bitter today as it was when Hammond and Horn announced their original statistics. At this moment it is our opinion that the evidence incriminating tobacco is more plausible than vice versa. However, more basic research into the nature of cancer is needed. The final answer that will satisfy all concerned will be found in the laboratory and not in statistical studies of the end results of the disease.

Chemical approach to depressions

The MAO inhibitors are in the pharmaceutical limelight. These antidepressants block the action of monamine oxidase (MAO), an enzyme that normally reduces the body's concentration of serotonin, epinephrine, norepinephrine, and the other amines. Drugs that inhibit or neutralize MAO are followed by increased concentration of serotonin and norepinephrine in brain tissue.

Iproniazid (Marsilid) is a potent MAO inhibitor. It is an analogue of isoniazid and was synthesized originally as a possible antituberculous agent. It was tableted, however, because it was not as effective as isoniazid and, in addition, produced physical and mental overstimulation.

Research in MAO inhibitors renewed interest in antidepressant drugs, mood elevators, energy awakens, and modifiers of brain function. Several pharmaceutical companies have products that fall into this category and they may be offered as remedies for mental depression. The list includes Catron, phenelzine, and several others that are designated by laboratory code numbers as well as Marsilid. Time will tell whether these products will prove valuable to the psychiatrist.



Keep your thoughts right—for as you think, so you are. Thoughts are things, therefore, think only the things that will make the world better and you unashamed. — Henry H. Buckley

Dr. Warren W. Furey dies of coronary

American medicine has sustained a great loss with the passing of Dr. Warren William Furey of Chicago, a member of the AMA Board of Trustees. Dr. Furey, aged 60, died of a coronary occlusion while attending a meeting of the Ra-



Warren W. Furey, M.D.
(1898-1958)

diological Society of North America at the Palmer House, Chicago, November 19.

Born in Chicago, January 8, 1898, he received his medical degree from Northwestern University Medical School in 1923. He interned at Mercy Hospital, Chicago. He became associated with the Stritch School of Medicine of Loyola University in 1927 and at his death was clinical professor of radiology.

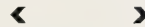
Dr. Furey served as president of the Chicago Medical Society in 1948; of the Tuberculosis Institute of Chicago and Cook County in 1956; of the Illinois Medical Service (Blue Shield) from 1950 to 1955; and of the American College of Radiology and Radiological Society of North America in 1955. He also was secretary of the Blue Shield Commission from 1951 to 1955.

He was a delegate to the AMA from 1948 to 1957, and became a member of the Council on Constitution and Bylaws in 1955. He resigned from the latter position last June when he was elected a member of the Board of Trustees.

Dr. Furey was certified by the American Board of Radiology, was chief radiologist at the Little Company of Mary Hospital, Evergreen Park, Ill., and Mercy Hospital, Chicago, and radiological consultant at Lewis Memorial Maternity Hospital, Chicago.

He also was a member of the American Roentgen Ray Society, International College of Surgeons, and American Radium Society. In 1954, he was presented the Radiological Society of North America's gold medal and citation for his long service to medicine. He was a prominent Catholic layman and a Knight of St. Gregory.

Dr. Furey is survived by his widow, Veronica; two sons, Warren Jr. and Edward, and two daughters, Rosemary and Mrs. Virginia Lawler.



Watch your tongue

Mr. R. Crawford Morris, a veteran Cleveland attorney, gave physicians the following recommendations to avoid liability suits:

1. Never guarantee a cure unless you mean to be held to it.
2. Watch the time factor. In most states the patient has one year within which to sue you for malpractice, whereas you have six years within which to sue her for your bill.
3. Keep up with the advance of medicine.
4. Do not experiment unless you have the patient's permission in writing.
5. Get the patient's consent for everything you do, preferably in writing.
6. Good housekeeping. Keep good records, full and adequate.
7. Do not be negligent. If you feel the case is beyond your experience, do not hesitate to call for a consultation and make a written record of the consultant's opinion.

In addition he urged physicians to "be as careful with your tongue as you are with your scalpel."

His talk was given at a forum on "The Doctor and His Practice," co-sponsored by the Erie (N.Y.) County Medical Society and the William S. Merrell Company, Division of Vick Chemical Company.

Medicine on postage stamps

Among recent issues of postage stamps dealing with the medical profession were the following:

Finland — Finnish berries are shown on a Red Cross series of three stamps.

France — One of two Christmas stamps bears the portrait of Henri Dunant, founder of the International Red Cross.

Germany (West) — The latest "Famous Men from Berlin's History" series includes a stamp picturing Friedrich Schliermacher, surgeon.

India — Children's Day was observed with the release of a 15np stamp picturing a nurse with a polio victim who was receiving rehabilitation treatment at the Kalabati Saran Hospital.

Netherlands Colonies (Antilles and New Guinea) — Each issued four stamps bearing a surcharge for the benefit of the Red Cross.

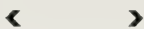
Portuguese Angola — Primitive and modern medical practice are contrasted in three stamps commemorating the 75th anniversary of the Maria Pia (Blessed Virgin) Hospital in Luanda. One shows a native witch doctor, another modern physicians at work, and the third Dr. Mor treating a native patient.

Portuguese Colonies (Cape Verde, Guinea, St. Thomas, Angola, Mozambique, Portuguese India, Macao, Timor) — Eight stamps in diamond format were issued in connection with the Congress of Tropical Medicine held in Lisbon. The stamps picture medicinal plants.

Russia — Two stamps, both of 40k value, were issued to commemorate the 49th anniversary of the Soviet Society of Red Cross and Crescent.

Switzerland — The 1958 Pro-Juventute series for child welfare includes a stamp with a portrait of Albrecht von Haller (1708-1777), Swiss anatomist and master physiologist of his times.

United States — The new 4c stamp bearing the portrait of Noah Webster is of medical interest because of his contributions to knowledge of epidemiology, particularly that of yellow fever. (See JAMA, November 29, 1958, page 1804.)



The older one gets the longer one lives and vice versa. If physical immortality is ever achieved it will be by the indefinite prolongation of life, and this is already under investigation, aided by a number of federal grants. *Editorial. Great Expectations New England J. Med. Aug. 28, 1958.*

Editorials

from other journals

Health field lures labor unions

The third party element continues to grow in influence in the practice of medicine as labor expands its welfare programs in the health institute field. One of the latest to enter the field is the St. Louis Meat Cutters' Union with a "one-stop" medical center as it was described by reporter Ted Schafer of the *St. Louis Globe-Democrat*. The new structure in St. Louis, built at a cost of 1 million dollars, is expected to have an annual operating budget of \$300,000. Funds to provide care for some 2,200 meat cutters and their families come through fringe benefits negotiated by the union. As Schafer said:

"Such protection does not come cheap. It only seems so to the workers because employers in most instances are paying the bills through union negotiated health and welfare contracts."

Preventive medicine and how it will cut down on absenteeism is stressed by the union as one of the benefits of the new clinic. Actually, the program also gives the union an even stronger hold over its members because it takes over another area of his personal life, his health.

"We are going to make it part of our contract that every meat cutter must take a complete physical checkup at least once a year," the union president said. "We are going to concentrate first on medical phases; dental work will come later."

It is impossible to argue with the wisdom of a physical examination each year. But for a union official to talk of imposing it on his constituents is another thing. Automatically, the free choice of whether a butcher wants an annual physical examination or not is destroyed. Not to mention quite a bit of the element of free choice of physician, if the butcher wishes to go outside the panel of physicians offered to him by the clinic.

Why would the meat cutter be told to get a physical examination each year? Ostensibly, because it is good for his health. But looking at it from another side, this just helps round out the power of the union president. It gives the union yet another control over its constituents. It also gives the union more bargaining power with the employers who are forced to pick up the check for the health clinic. To the meat cutter's boss

and the consuming public, the union chieftain can point out how the public is protected by having healthier meat cutters.

But what of the individual butcher? He has just signed away another freedom in return for what he feels is economic betterment. By the time he adds up his dependence on the union, he virtually is living in a segregated socialistic society run by union leaders. Once a complete retirement plan is worked out for him, he will have few decisions to make.

The growth of labor health centers is part of a pattern across the nation. The field of fringe benefits offers a wealth of rich-sounding phrases and services that help weld union cohesion. Health and welfare benefits normally are administered by the union officials and if a worker does not choose to avail himself of them, it is only the worker's loss. However, the worker usually sees that health benefits actually are part of his salary and he can ill afford to continue going to his old family doctor. It has a special appeal to the worker with a large family. Mother can take all the kids down to the union clinic for a checkup without paying out a dime. This doubly appeals to her, if the doctor there treats her nice and appears competent.

The success and future of the labor health institutes depend upon these factors. If they satisfy the workers and their families, they doubtless will continue to grow.

Two other labor groups in the St. Louis area already have indicated a keen interest in such programs, according to the *Globe-Democrat*. They are the carpenters' organization with 10,000 members and the machinists, with 15,000.

To give some indication of the scope of the health and welfare field, it has been estimated by the Department of Labor that about 8 billion dollars is invested annually in such programs.

One of the early leaders in the field was the United Mine Workers Union. In the fiscal year ended June 30, the UMWA is reported to have spent more than 58 million dollars for hospital and medical care. There was a major controversy in the last AMA House of Delegates over the relations between medicine and the UMWA Welfare and Retirement Fund. As it came out, the House called for an immediate public relations campaign to educate the public to the restrictions to free choice of physician and hospital being imposed by the UMWA.

Yet another giant in the labor field is even now examining the health field. The United Steelworkers' Union has called for a broad study with a view to setting up union-operated hospitals and clinics in areas it feels may need them.

"We are confident that a united and determined membership can win the goal of full medical security for all steelworkers through the process of collective bargaining," union spokesmen declared.

This trend toward more and more union negotiated health and welfare institutes is surprising in view of the increasing availability of voluntary and commercial insurance plans. Through such a method, free choice of physician automatically is available to the workers. This would eliminate at least one of the objections of the medical profession to such programs. In view of recent congressional investigations into the management of union welfare funds, insurance programs would seem to provide the stable protection that the workers have a right to expect at a price commensurate with the benefits of the insurance policy.—W. F. Francka, M.D., president, Missouri State Medical Association *Missouri Med.* 55:1229 (Nov.) 1958.

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AMA House of Delegates Acts on Many Problems

The House of Delegates of the American Medical Association meeting in conjunction with the 12th Clinical Session in Minneapolis, December 2-5, considered many problems of medicine.

Actions taken included the following subjects: medical care of the aged, medical care plans, osteopathy, medical education, administrative changes, AMA objectives and basic programs, and voluntary health organization fund raising.

The House heard Dr. Gunnar Gundersen of La Crosse, Wisc., AMA president, call upon the medical profession to exert leadership and imagination in meeting the problems of these changing times. Dr. Gundersen said that "the time has passed for policies based on generalities, platitudes, and flag-waving."

Also heard was Governor Orville L. Freeman of Minnesota who called for help by the medical profession "in working out a program that will most adequately meet the needs of our older citizens for health care and services of the highest quality."

HEALTH CARE OF AGED

In response to these pleas, the House adopted the following proposal, submitted by the Council on Medical Service and endorsed by the Board of Trustees:

"For persons over 65 years of age with reduced incomes and very modest resources, it is necessary immediately to develop further the voluntary health insurance or prepayment plans in a way that could be acceptable both to the recipients and the medical profession. The medical profession must continue to assert its leadership and responsibility for assuring adequate medical care for this group of our citizens.

"Therefore, the Council on Medical Service recommends to the House of Delegates the adoption of the following proposal: That the AMA, the constituent and component medical societies, as well as physicians everywhere, expedite the development of an effective voluntary health insurance or prepayment program for the group over 65 with modest resources or low family

income; that physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such insurance and prepayment plans at a reduced premium rate."

In order to effect the immediate implementation of such a program, the House directed that copies of the proposal be distributed to medical society approved plans, including Blue Shield and private insurance programs, requesting their co-operation.

MEDICAL CARE PLANS

The long awaited report of the Commission on Medical Care Plans, appointed at the 1954 clinical meeting in Miami, was discussed for two hours at a reference committee hearing, but the House decided to defer action until the June 1959 meeting. In so doing, the delegates adopted this statement:

"We respectfully suggest to the constituent associations reviewing the report in the interim, that their attitude regarding the report will be clarified if they arrive at some decisions in regard to the following basic points:

"1. Free Choice of Physician — Acknowledging the importance of free choice of physician, is this concept to be considered a fundamental principle, incontrovertible, unalterable, and essential to good medical care without qualification?

"2. Closed Panel Systems — What is or will be your attitude regarding physician participation in those systems of medical care which restrict free choice of physician?

"These suggestions acknowledge that the policy of the AMA to encourage and support the highest quality of medical care for all patients remains unchanged. They question, however, whether attitudes toward the free choice of physician and the closed panel system may be undergoing evolutionary change."

The House recommended that the Board of Trustees invite the constituent associations to forward their replies to these questions to the

executive vice president 60 days in advance of the June meeting.

OSTEOPATHY

Considerable discussion centered on a resolution which would have recognized that constituent medical associations have the right to establish the relationship of the medical profession to the osteopathic profession within their respective states.

The House decided, however, that the resolution in question did not offer the appropriate solution to the osteopathic problem. The delegates requested the Judicial Council to review past pronouncements of the House on osteopathy and the status of the laws of the various states in this regard. The Council was asked to present its report and recommendations at the June meeting.

The House "noted with favor that the American Osteopathic Association has amended its objectives as stated in its constitution by deleting reference to the cultism of Andrew J. Still."

MEDICAL EDUCATION

The House approved a statement by the Council on Medical Education and Hospitals supporting the development of additional facilities for basic medical education, and it urged the entire profession to give that policy strong support in order to correct misinterpretations of the Association's viewpoint regarding the supply of physicians.

"American medicine," the statement pointed out, "fully recognizes the needs being brought about by the increasing population, social and economic trends, and the changing dimensions of medical knowledge and its application."

Urging careful analysis of those needs, the statement said that existing medical schools should consider the possibility of increasing their enrollments and developing new facilities. It also declared that American medicine has the responsibility to encourage the creation of new four-year medical schools and two-year basic science programs by institutions of higher education that can provide the desirable setting.

ADMINISTRATIVE CHANGES

A Board of Trustees report on the administrative structure of the AMA was approved by the House, which termed the reorganization of

the headquarters staff as a long and important step in the right direction. The report informed the House that the Chicago staff has been divided into the following seven divisions: business, law, communications, field, scientific publications, socioeconomic activities, and scientific activities. The latter two are still in the process of development and are temporarily under the direction of the assistant executive vice president.

The Board also reported that the Committee on Legislation has been renamed the Council on Legislative Activities. This new council will undertake an enlarged, strengthened legislative program, closely co-ordinated with the activities of the new field staff and the Washington Office. The latter also has been reorganized, with overall direction coming from Chicago.

OBJECTIVES, BASIC PROGRAMS

The House commended the report of the Committee to Study AMA Objectives and Basic Programs, which it said may be a significant milestone in AMA history. In approving one of the committee's recommendations, the House referred to the Council on Constitution and Bylaws the following suggested amendment of Article II of the Constitution: "The objectives of the Association are to promote the science and art of medicine and the betterment of public health and an understanding of the socioeconomic conditions which will facilitate the attainment of these objectives."

The House also recommended that the Board of Trustees establish a mechanism which will assume the responsibility for promoting active liaison with each national medical society.

"In the scientific fields," the House declared, "the role of the AMA should be primarily that of leadership, but every endeavor should be made to bring about co-ordination of the special fields of scientific interest of the other national medical organizations."

The delegates also approved a recommendation that the Board of Trustees give serious consideration to opening the publications of the Association to a free discussion of socioeconomic problems applicable to medicine.

FUND RAISING

Once again considering fund raising problems which have arisen since development of the concept of united community effort, the House

passed a resolution pointing out that the action taken last June in San Francisco has been interpreted by some as disapproving the inclusion of voluntary health agencies in United Fund drives. It then stated that "the AMA neither approves nor disapproves of the inclusion of voluntary health agencies in United Fund drives."

The resolution also requested the Board of Trustees to arrange a top level conference with the voluntary health agencies, the United Funds, and other parties interested in the raising of funds for health causes, with a view toward resolving misinterpretations and other difficulties in this area.

OTHER ACTIONS

Numerous other subjects were considered. The House:

(1) Took notice of the recent restrictive changes in the Medicare program; expressed regret at the substitution of federal facilities for private care in the areas mentioned, and urged the AMA to encourage the re-establishment of services under the free choice principle to accomplish the original intent of act.

(2) Recommended that the Social Security Act be amended by Congress to permit states to combine the present four public assistance medical programs into a single medical program, administered by one agency and making available uniformity of services to all eligible public assistance recipients in the state.

(3) Authorized the Council on Medical Service to sponsor at the earliest practicable date a Congress on Prepaid Health Insurance.

(4) Approved a plan to develop "buyers' guides" which will be sent to physicians to help their patients analyze the merits of available health insurance programs;

(5) Approved a bylaw amendment which will allow dues exemptions for interns and residents serving in training programs approved by the Council on Medical Education and Hospitals.

(6) Called to the attention of all individuals or institutions responsible for intern and resident training that medical services provided to patients in hospitals are the responsibility of duly licensed physicians.

(7) Encouraged the voluntary registration of the paramedical personnel who assist physicians, but opposed the extension of governmental licensure and governmental registration at this time.

(8) Approved and lauded the purpose, content, and format of the AMA News, and recommended continuance of the publication under its present and established policies.

(9) Agreed with the Committee on Medical Practices that relative value studies should be conducted by each constituent medical association but not on a national or regional basis by the AMA.

(10) Urged each constituent society to establish a committee on rehabilitation to carry out activities recommended by the Board of Trustees.

(11) Called for continued activity at all levels to stimulate the development of effective poliomyelitis inoculation programs.

(12) Suggested that the AMA take immediate steps toward developing a plan whereby reserve medical units and individuals not immediately involved in military operations could be used to supplement civil defense operations.

(13) Expressed gratitude and appreciation for the long years of devoted service by Dr. Austin Smith, who resigned as editor of the Journal of the AMA.

At the opening session, six state medical societies contributed a total of almost \$250,000 to the American Medical Education Foundation. The gifts were: California, \$150,306; Indiana, \$35,110; New Jersey, \$25,000; New York, \$19,608; Utah, \$9,977; and Arizona, \$8,657. In addition, the Board of Trustees announced an AMA contribution of \$100,000 to the Foundation.

The Board also announced that Dr. W. Linwood Ball of Richmond, AMA vice president, had been appointed to the Board of Trustees to fill the vacancy caused by the death of Dr. Warren Furey of Chicago. Dr. Ball, who will serve on the Board until next June, said he will not be a candidate to succeed himself.

Dr. Lonnie A. Coffin of Farmington, Ia., was selected as "General Practitioner of the Year."

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CORRESPONDENCE



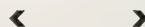
Clinics for crippled children listed for February

Twenty-two clinics for Illinois' physically handicapped children have been scheduled for February by the University of Illinois, Division of Services for Crippled Children. The division will count seventeen general clinics providing diagnostic orthopedic, pediatric, and speech and hearing examination along with medical social and nursing service. There will be two special clinics for children with cardiac conditions, two for children with rheumatic fever, and two for cerebral palsied children.

Clinics are held by the division in co-operation with local medical and health organizations, both public and private. Clinicians are selected among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

- February 3 — Macomb, Phelps Hospital
- February 4 — Alton (Rheumatic Fever), Alton Memorial Hospital
- February 4 — Hinsdale, Hinsdale Sanitarium
- February 4 — Metropolis, Massac Memorial Hospital
- February 6 — Chicago Heights (Cardiac), St. James Hospital
- February 10 — East St. Louis, St. Mary's Hospital
- February 10 — Peoria, Children's Hospital

- February 11 — Aurora, Copley Memorial Hospital
- February 11 — Tuscola, Community Building
- February 12 — Springfield, St. John's Hospital
- February 13 — Evanston, St. Francis Hospital
- February 17 — Belleville, St. Elizabeth's Hospital
- February 18 — Chicago Heights (General), St. James Hospital
- February 19 — Elmhurst (Cardiac), Memorial Hospital of DuPage County
- February 19 — Litchfield, Madison Park School
- February 19 — Rockford, St. Anthony's Hospital
- February 24 — Effingham (Rheumatic Fever), St. Anthony Hospital
- February 24 — Peoria, Children's Hospital
- February 25 — Elgin, Sherman Hospital
- February 25 — Springfield (Cerebral Palsy), Memorial Hospital
- February 26 — Anna, County Hospital District
- February 26 — Bloomington, a.m. (General), p.m. (Cerebral Palsy), St. Joseph Hospital



AMEF chairmen to meet

State chairmen of the American Medical Education Foundation will meet at the Palmer House, Chicago, January 24-25, to consider problems of current and future financing of medical education.

Plan course in arthritis and related disorders

A postgraduate course in arthritis and related disorders will be presented in Thorne Hall, Northwestern University, Chicago campus, February 19-21. It will be sponsored by Northwestern University Medical School, Chicago Medical School, University of Chicago School of Medicine, University of Illinois College of Medicine, and Stritch School of Medicine of Loyola University; the Chicago Rheumatism Society, Chicago Orthopedic Society; and the Illinois Chapter of the Arthritis and Rheumatism Foundation.

The faculty will consist of six nationally known investigators in rheumatic diseases and educators from the Chicago medical schools. The course will review basic concepts and recent clinical developments. There will be a fee of \$50, with complimentary admission available to members of the armed forces and house staffs.

Information may be had by writing to Dr. Frank R. Schmid, Northwestern University Medical School, 303 East Chicago Avenue, Chicago 11.

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How to bill for services to military personnel

The following explanation on how to submit bills for services rendered to army military personnel by physicians and civilian hospitals, when in doubt, comes from the headquarters of the Fifth United States Army:

"In situations when the civilian medical agency is in doubt concerning the normal procedure, bills may be submitted directly to Headquarters, Fifth United States Army, Office of Army Surgeon, 1660 East Hyde Park Boulevard, Chicago 15, with a request that they be placed in appropriate channels for settlement.

"Such bills should show name, rank, service number, organization, and duty station of the patient, disease, or disability treated, inclusive dates and nature of the services, and a brief statement of the incident leading to the treatment.

"The above pertains only to care of military personnel, and should not be confused with the established procedures for the processing of claims for care of eligible military dependents under Medicare."

Offer postgraduate course in diseases of chest

The Council on Postgraduate Medical Education of the American College of Chest Physicians will present its 12th annual Postgraduate Course on Diseases of the Chest at the Sheraton Hotel, Philadelphia, March 30-April 3.

Recent advances in diagnosis and treatment of heart and lung diseases will be presented. The tuition fee will be \$100, including luncheon meetings.

Information may be had by writing to the executive director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11.

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Aero medical meeting

The 30th annual meeting of the Aero Medical Association will be held in the Statler Hotel, Los Angeles, April 27-29. Dr. Charles I. Barron, Lockheed Aircraft Corporation, is general chairman.

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Course in allergy

The American College of Allergists will hold its graduate instructional course and annual congress, March 15-20, at the Mark Hopkins Hotel, San Francisco, March 15-20. Information may be had from Dr. John D. Gillespie, treasurer, 2049 Broadway, Boulder, Colo.

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Am. College of Surgeons announces 1959 meetings

The American College of Surgeons announced the following sectional meetings for 1959:

January 19-21 — Francis Marion Hotel, Charleston, S.C.; February 2-4 — Shamrock Hilton Hotel, Houston; February 26-28 — Hotel Vancouver, Vancouver, B.C.; March 9-12 — Kiel Auditorium, St. Louis (surgeons and nurses); April 6-9 — Queen Elizabeth Hotel, Montreal, Que. (surgeons and nurses).

The annual clinical congress will be held in Atlantic City, September 28-October 2.

Information may be had by writing Dr. Michael L. Mason, secretary, 40 East Erie Street, Chicago 11.

Medical education congress to be held in February

The 55th annual Congress on Medical Education and Licensure will be held in the Palmer House, Chicago, February 7-10. It will be sponsored by the Council on Medical Education and Hospitals of the AMA, the Advisory Board for Medical Specialties, and the Federation of State Medical Boards of the United States.

On the first day, the Federation will hold its third examination institute in physiology, biochemistry, medicine, and public health. The second day will be devoted to "Specialism in Medicine." The theme of the morning of the third day will be "The Role of Research in the Education of All Physicians." In the afternoon, the role of medical education in civilian and defense mobilization will be discussed. The annual dinner and Walter L. Bierring Lecture will be given that evening. The Federation will present a program on the final day.

Details may be obtained from the AMA Council on Medical Education and Hospitals, 535 North Dearborn Street, Chicago 10.

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Heart fund campaign scheduled for February

The 1959 Heart Fund drive of the American Heart Association will be conducted throughout February.

An expanded research program is the major goal of the association, its affiliates, and chapters. This can become a reality through increased public contributions to the Heart Fund, which also supports the educational and community service activities of the association. Cardiovascular diseases account for 54 per cent of the deaths in the United States.

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AMA to sponsor three medicolegal meetings

A series of three regional medicolegal conferences will be held in March and April as part of a continuing effort to create a better working relationship between lawyers and physicians.

Dates and locations for the conferences are: District of Columbia Medical Society headquarters, Washington, March 20-21; Hotel Cleveland,

Cleveland, April 4-5; and Hotel Utah, Salt Lake City, April 18-19.

The conferences will be sponsored by the AMA Law Division in co-operation with state and local medical societies. The following states will be represented at the Cleveland meeting: Illinois, Ohio, Michigan, Indiana, Wisconsin, Kentucky, Tennessee, West Virginia, and Pennsylvania.

Subjects to be covered will be: narcotic addiction, traumatic neurosis, Res Ipsa Loquitur and medical professional liability, contingent fees, and impartial medical testimony.

The registration fee of \$5 will cover the cost of the luncheon and a copy of the proceedings. Advance registrations should be mailed to the Law Division, AMA, 535 North Dearborn Street, Chicago 10.

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Maternal, infant care to be conference topics

Modern maternal and infant care in Illinois will be the theme of the third Illinois Congress on Maternal and Infant Care, to be held at the Hotel St. Nicholas, Springfield, January 28-30.

The conference will consist of breakfast meetings, formal papers, panels, and round tables. These will cover 51 subjects.

Emphasis will be placed on "Anesthesia—Techniques and Hazards" and "Emergencies of the Newborn." Dr. Bayard Carter, professor of obstetrics and gynecology at Duke University, Durham, N.C., and immediate past president of the American Association for Maternal and Infant Health, will speak on "Modern Day Stresses in Obstetrics and Gynecology."

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Do YOU know YOUR Auxiliary?

The Woman's Auxiliary to the Illinois State Medical Society was organized in 1927 for the purpose of assisting the Society in its program for the advancement of medicine, public health, and medical education. In the pursuit of these ends throughout the years, we have endeavored to secure better legislation and have acted as a liaison between the medical profession and the general public. In addition to these continual disciplines, we may point to our efforts and achievements in the field of nurse recruitment,

to our contributions to the American Medical Education Fund and our own state Benevolence Fund, and to the many phases of our community service.

Our organizational pattern is similar to that of our parent organization; each County Auxiliary is a component part of the State Auxiliary just as each County Medical Society is a component part of the ISMS. We would assume, therefore, that there are as many county auxiliaries as there are county medical societies. But that is not the case. There are 93 medical societies in 96 counties and only 40 auxiliaries in 44 counties. Why aren't there 93 auxiliaries firmly aligned with the 93 county medical societies? The answer can come only from those county medical societies that have no auxiliaries. Granted, there are many counties with too few physicians to make auxiliary organization feasible, but what about those in which there are more than 15 physicians?

We are an auxiliary to you, the ISMS, and work under the able guidance of our councilors. We do not set policy but execute such programs and functions as our parent organization delegates to us. Our program is a long-range one and should exert continual values upon the entire community. We stick to a job until it is done, but how much more effective we could be if every physician's wife in every county were a member of an auxiliary in her own area. I am sure every physician's wife has the desire and the time to help her husband's profession. Nearly 10,000 physicians in Illinois are members of the ISMS, but there are less than 3,000 auxiliary

members. True, we have some bachelors and widowers, but if our Auxiliary had at least 5,000 more members throughout the state, we could move mountains. Multiply the work done in one auxiliary by 91 and you will get an idea of the enormous amount of womanpower available for community service in the name of the medical profession.

This leads me to the core of this article. If there is no organized auxiliary in your county, we would be happy to meet with you and tell you of the work we do and how we can serve you. If it is not possible to have an auxiliary because of your small size, we invite wives to affiliate with a neighboring county or to become members-at-large. If your county has an auxiliary, and your wife is not a member, encourage her to join us. Her membership means she has joined other physician's wives in the community, state, and nation in discovering the pleasure and satisfaction of doing something for the profession. I am certain that each organized county auxiliary has ably demonstrated the value of the services it has rendered in all departments of our work.

For information on organization or any phase of auxiliary work, please write to me. I may not know all the answers but be assured that your questions will be channeled to the proper person.

Mrs. John Van Prohaska,
5830 Stony Island Avenue,
Chicago, 37, Illinois
President-Elect and Organization Chairman

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Material possessions

During World War II I served for a time with a roving band of guerrillas behind the enemy lines. My interpreter, a communist physician, and I had ample opportunity for protracted discussions as we hid in caves or camped in the mountains between periodic episodes of military forays. In debates setting forth or defending our individual philosophies of life, my materialistic friend would express repeatedly his amazement that I, a man of science, could believe in anything that could not be demonstrated by scientific standards of proof. He prided himself on his staunch beliefs only in those things which could be tested in the exacting crucible of laboratory research or solved by the precise intricacies of a mathematical formula.

One sunny afternoon as our motley band of warriors rested on the side of a mountain, my interpreter physician informed me that we had been surrounded by the enemy and our position was precarious. Plans called for a dash through this encirclement after dark. Letters home might be written and would be hidden safely for later procurement.

As I sat writing a farewell letter to my wife and children, each breath of air, each glint of sunlight on the sparkling mountain stream, each copper-tinted autumn leaf, each cascading warble of the birds, each gentle sigh of the wind became crystallized into something a thousand times more beautiful when viewed in the perspective of life and death. My communist friend sat a stone's throw away, deeply engrossed in the bittersweet task of composing words which might be his final communication with his wife and children.

In the midst of writing I paused to interrupt my companion's sober reflections and to question him as to whether the significant thoughts embodied in his composition were such as could be proved in the test tube or on the blackboard. The answer received was an averted look, for he knew as well as I did that our most profound thoughts in the face of the impending crisis were not related to the material things of life, nor could they be measured by the tools of physical exploration. There were neither qualitative nor quantitative tests that could evaluate accurately our intimate personal experiences of love or hope.

Spiritual understanding does not lend itself

readily to the circumscription of a curriculum or credit hour. Neither does the purely intellectual appreciation of spiritual values necessarily denote depth of spiritual understanding. The experiential demand of wisdom embraces a far greater comprehension of life than does that of knowledge alone. Granted that the burden of educational responsibility for the moral and spiritual development of the student rests with the parents, this does not free the educational institution from its obligation of maintaining an environment in which such growth finds a healthy intellectual soil. It is in this very area of difference between our philosophy of education and that practiced behind the Iron Curtain that we find the mustard seed of faith which, if nurtured, blossoms into an expression of moral strength.

It has been said that history will characterize our civilization as one in which the measure of success was that of material possessions. Be that as it may, unless our system of education builds in the youth of today the capacity to appreciate the creative fruits of other than the material things in life, we will have denied our adults of tomorrow most of life's really profound satisfactions. *M. A. Casberg, M.D. Knowledge Comes but Wisdom Lingers. J. M. Educ. Sept. 1958.*

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Flat on your back

Sir,—I have discovered an interesting reaction made by patients during routine examination. On making the request, "Please lie on your back," the patient almost invariably rolls over into the prone position, making it completely impossible to examine the abdomen. In a fairly unselected series, I have found this response in about 80 per cent of patients. It does not seem to depend on the apparent intelligence of the subject. I have noticed that the correct position invariably can be obtained by asking, "Please lie flat on your back." Can anyone explain the psychology of this different response? *K. G. Bland Birmingham, 29. Correspondence. Brit. M. J. Nov. 15, 1958.*

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Sometimes a noble failure serves the world as faithfully as a distinguished success. — Dowden

AT THE EDITOR'S DESK



THE OTHER SIDE OF ORINASE

Business organizations must file a financial statement with the Securities and Exchange Commission before they offer their common stock to the public. Upjohn did this last month and, according to the F-D-C Reports, they pay a 7½ per cent royalty in sales of Orinase under the license agreement with the German firm of Farbwerke Hoechst. They agreed to pay a minimum of \$2.3 million within 10 years from the effective date, with \$1.3 million to be paid within the first five years. This agreement was made in return for an exclusive nontransferable U.S. license to make, sell, and use anti-diabetic products under Hoechst's sulfonylurea German patents. The two companies also agreed to exchange know-how on development and use of the compounds. If Upjohn develops new products from the basic compounds it must offer Hoechst the basic license. Upjohn told the SEC that over 300,000 patients in the United States are now being maintained on Orinase, indicating that sales are running into \$15 million or more per year. Now, Pfizer is utilizing one of the Upjohn license patents in the production of licensed compounds, according to F-D-C Reports. The main license is in the use of steroid intermediates.

HIRE THE HANDICAPPED

Two eastern hospital administrators recommended hiring the handicapped in these times of personnel shortage. They reported in Hospitals that 47 of the 780 employees at the Albert

Einstein Medical Center are handicapped and 40 of these hold jobs requiring some physical effort. Work records show that absenteeism was less for the disabled than for the normal employees. They stated also that older persons made excellent workers, not only in jobs requiring a minimum of strain but also in jobs where the introduction of more modern and effective equipment results in lessening of strain.

TRUE OR FALSE?

From the annual meeting of the ADA we learned that 85 per cent of a surveyed group were of the erroneous opinion that loss of teeth and wearing of artificial dentures were inevitable. This brings up an interesting speculation. Is there an age limit to teeth and will they fall out ultimately if the person lives long enough? The questionnaire revealed that 54 per cent realized the importance of caring for the child's first teeth until they were lost naturally; but only 51 per cent were aware of the importance of replacing missing back permanent teeth to keep the rest of teeth and the mouth tissues intact.

New high speed dental drills which operate up to 300,000 revolutions per minute have made drilling as painless as possible. As one dentist described it "The teeth feel as if they are being rubbed rather than ground." We began to anticipate our next dental visit until another dentist said "There still is need for the so-called hand cutting instruments for precision and effectiveness." There is no substitute for the practical side of dentistry.

FALLOUT

The Public Health Service reported that radioactivity levels in milk collected during August. From past experience, month-to-month country continued to be below the current permissible levels recommended by the National Committee on Radiation Protection and Measurements. Radiation levels from six stations showed a decline in strontium-90 compared with July data. Three stations, in the milksheds serving Atlanta, Chicago, and Sacramento reported slight increases over July. A tenth station, serving Spokane was added to the network in August. From past experience, month-to-month fluctuations in levels are to be expected.

PHARMACEUTICALS

The New York State Journal of Medicine carried an article on a one year study of 93 hypertensives who received Harmony1 (Abbott Laboratories). The results:

1. The product lowered the blood pressure of 68 patients,
2. It produced subjective improvement in 89 patients, and
3. No side effects occurred to interrupt treatment.

Pathilon (Lederle) has been used for several years as an anticholinergic in the treatment of peptic ulcer. A new dosage form is now available for colicky infants. It was used recently on 204 babies with reported benefit in 70 per cent.

E. Fougera Co. announced the debut of Orabilex, an oral X-ray medium that permits gall bladder visualization with a single standard

dose, regardless of the patient's weight. The incidence of side effects is less than five per cent.

Two British State physicians report that the aerosol detergent, Alevaire, was effective in relieving bronchial obstruction in five infants with acute laryngotracheobronchitis. Three of these youngsters were in danger of asphyxiation and tracheotomy was indicated. The mucolytic detergent was administered from a nebulizer as a fine mist, with immediate improvement.

A new form of oral atropine (Atratan) was reported at the recent Minneapolis meeting of the AMA as relieving symptoms of ureteral colic in 47 of 50 patients; 87.5 per cent of the patients required no narcotics.

Protef is Upjohn's new suppository that combines hydrocortisone acetate and neomycin sulfate. It is said to be of value in a wide variety of rectal conditions and helps relieve discomfort, speeds tissue repair, and affords protection against secondary infection.

The war is on. Ciba has recently introduced a new diuretic and an effective hypertensive agent that is to compete with Merck, Sharp & Dohme Research Laboratories' Diuril. It is dihydrochlorothiazide (Esidrex). A group of Texas investigators call it most promising. Merck, Sharp & Dohme is keeping pace with the competition by announcing a new and more potent derivative of chlorothiazide (Diuril), called HydroDiuril. It is hydrochlorothiazide and appears to have the same biologic effects in therapy as Diuril.

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THE P. R. PAGE

John A. Mirt



Choice of physicians campaign

The AMA is engaged in a broad, twofold educational campaign to acquaint the profession and the public with the benefits to be derived from preservation of the American right to freedom of choice of physicians.

The first phase is directed toward the profession and stresses the inherent dangers of third party encroachment on the private practice of medicine. It urges medicine to re-emphasize the importance of policing its ranks and in preserving the high quality of medical care this country enjoys.

The second campaign is geared to the general public and emphasizes the following areas: (1) the patient should have the right to choose his personal physician; (2) the benefits to be gained from a close personal physician-patient relationship; and (3) the need for selecting a personal physician before sickness strikes.

Campaign material is obtainable from the Communications Division of the AMA, 535 North Dearborn Street, Chicago 10.

Public education through films

Films on the subject of medicine and health are excellent media to reach the laity, in the opinion of Dr. Bruno Gebhard, director of the Cleveland Health Museum, who directed the health and medicine exhibit at the New York World's Fair. Lectures and pamphlets have only limited appeal in this age of visual communication, Dr. Gebhard believes.

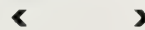
He says county medical societies might seri-

ously consider establishing health film libraries, offering loan films to schools and community groups. This he adds, would be a worthwhile project wherever there is an active woman's auxiliary. He offers this advice:

"Films are best used when they are the starting point for discussion, both in schools and with adult groups. Films should be more than just program fillers or time killers.

"Hospitals, especially those dealing with chronic diseases, have a great opportunity to use films for patient education. The same is true with the clientele of outpatient departments, with expectant mothers' classes, and other special groups, like diabetic patients.

"Physicians should be warned not to use a film, especially of a technical nature, in patient education, which they have not personally previewed. Films good for professional education seldom do a good job in public education."



Serum trypsin

Our findings suggest that in the presence of pancreatic disease there is a significant elevation of serum trypsin. This elevation is believed to result from an obstructive process in the pancreas combined with an active secreting gland. In this series, the serum trypsin determination proved a more sensitive and reliable index of pancreatic disease than either the serum amylase or the serum lipase. *G. L. Nardi, M.D. and C. W. Lees. Serum Trypsin. New England J. Med. Apr. 17, 1958.*

NEWS of the STATE



ADAMS

MEETING. Adams County Medical Society held their annual business meeting in Quincy Dec. 8. The 1959 president is Dr. Hugh S. Espey; president elect, Dr. Eric J. Shoengood; and secretary, Dr. Richard Cooper.

COOK

BLOOD CENTER. A \$250,000 blood bank and research center was dedicated Sunday at Mount Sinai Hospital, Chicago. The new facility was named the Charles Hymen Blood Center after Charles Hymen, a principal contributor. Speakers included Dr. T. R. Van Dellen, and Dr. Israel Davidsohn, director of research at Mount Sinai Medical Research Foundation.

LECTURE. Dr. Edmund Jacobson, Chicago, spoke on "Electrical Measurements of Mental Activities" and "Physiological Psychiatry" at the University of Wichita. Dr. Jacobson acted as consultant on a research project being carried on at the University.

LABORATORY. The establishment of the Commander Eugene F. McDonald, Jr., Memorial Laboratory for Exfoliative Cytology at the University of Chicago Medical Center has been announced. Dr. Lowell T. Coggeshall, dean of the University's division of biological sciences said that the formation of the Laboratory has been financed by leaders in the radio and television industry as a memorial to the late founder-president of Zenith Radio Corporation of Chicago.

CANCER CENTER. The Cancer Prevention Center of Chicago has received a grant from the American Cancer Society of \$5,272 for the purpose of establishing a new gastric analysis test (Diagnex) as part of the routine checkup given at the Center.

ANNIVERSARY. The Chicago Medical School marked 10 years of its accreditation and approval as a medical college of high standing on Nov. 25. Alex Dreier, radio and TV analyst and news commentator, related the early history of the school up to its approval in 1948 by the American Medical Association and the Association of American Medical Colleges. Dr. John J. Sheinin, president of the school, gave a progress report and described the planning of a new research institute, the first of seven buildings to be erected on the 10 acres of ground in the West Side Medical Center.

MEETINGS. Chicago Neurological Society presented the following program Dec. 9: "Experimental Production of Motor Neurone Diseases"—Harold Keonig; "Persistent Carotid-Basilar Anastomosis"—Roland A. Manfredi, Oscar Sugar, and Beaumont Johnson; "An Unusual Case of Primary Cerebellar Sarcoma"—Benjamin Boshes and Kenesaw M. Mannings.

The Chicago Society of Internal Medicine met Dec. 15 and had the following program: "Chronic Erythremic Myelosis with Hemochromatosis"—Frank E. Trobaugh, Jr. and Alessandro Emanuelli; "Carcinoma of the Pancreas: Clinical Study of 79 Cases"—Harold P. Lazar,

Mitchell A. Spellberg, and Ronald E. Fox; "The Relationship of Intracellular Potassium Ion Concentration to Excessive Doses of Digitoxin and Desoxycorticosterone Acetate Administration: A Chemical and Morphologic Study"—Franklin A. Kyser, Henry Teloh, and George C. Sutton.

The Society of Medical History of Chicago met Dec. 17 and had the following program: "The Vienna School of Pediatrics and the Concepts of Allergy"—Helmut P. G. Seckel; and "Ladies of Lynn: Emphasis on One"—E. Lee Strohl.

COOK COUNTY HOSPITAL. Dr. E. Trier Morch, professor of surgery and director of the section on anesthesiology at the University of Chicago for the past six years, has been made chief and professor of anesthesiology at Cook County Hospital.

Dr. Joseph J. Litschgi, department of radiology, Cook County Hospital, presented an exhibit on hemolytic anemias at the annual meeting of the Radiological Society of North America. Drs. William T. Meszaros and Melvin Sisson, department of radiology, Cook County Hospital presented an exhibit on Neurofibroma at this meeting also.

HISTORY LECTURES. Dr. Percival Bailey, professor of neurology and neurological surgery, University of Illinois College of Medicine, will speak on "The History of Neurosurgery" at the International College of Surgeons Hall of Fame, 1524 Lake Shore Drive, Chicago, February 3 at 8 p.m. Dr. George F. Lull, assistant to the president of the AMA, will speak on "Notes About the Role of Physicians in Our Military History," February 24, at 8 p.m. The lectures are free and open to physicians, medical personnel, and the public.

HONORED. Dr. H. Close Hesseltine, professor and secretary of the department of obstetrics and gynecology of the University of Chicago, has been named Mary Campau Ryerson professor of obstetrics and gynecology. Dr. Hesseltine is president of the Chicago Gynecological Society, a trustee of Illinois Medical Service (Blue Shield), a Fellow of the American and Illinois Gynecological Societies, and past secretary and treasurer of the Chicago Chapter of Sigma Xi. He is the immediate past chairman of the council of ISMS.

DEKALB

MEETING. Dr. Edward W. Klink, Rockford, spoke on "Practical Office Gynecology in Relation to Endocrine Disorders" at the Bishop McLaren Foundation, Sycamore, before the DeKalb County Medical Society.

DuPAGE

NEW OFFICER. Dr. Theodore J. Wachowski, Wheaton, was named president-elect of the Radiological Society of North America at the group's 44th annual meeting.

EDGAR

MEETING. Edgar County Medical Society had their county pharmacists as guests at the December meeting. Movies—"The Clinical Manifestations and Treatment of Gout," and "Orinase, Grand Round, Number 7" were shown.

EFFINGHAM

PARTY. Effingham County Medical Society and St. Anthony Hospital staff enjoyed a Christmas party given by the Sisters of St. Francis at St. Anthony Memorial Hospital Dec. 8.

FAYETTE

HONORED. November 18th was designated as Dr. Mark Greer Appreciation day by J. Cecil Smith, mayor of Vandalia. At the dinner in the evening Dr. Greer, named "Outstanding General Practitioner of 1959" by the Illinois State Medical Society, repeated his life's slogan, "If you want to be happy, give something to somebody, and this something does not have to be the material things of life."

GREENE

MEETING. The Greene County Medical Society held its December meeting for the election of officers in Carrollton Dec. 10.

KANE

PARTY. The Kane County Medical Society held its Christmas party at St. Charles County Club Dec. 10.

KNOX

MEETING. Dr. Harry F. Dowling, professor of medicine, University of Illinois College of Medicine spoke on "The Problem of the Antibiotic Resistant Staphylococci" on Dec. 18 at the meeting of the Knox County Medical Society.

LAKE

MEETING. Lake County Medical Society held its annual election of officers at the December meeting following a social hour at Rustic Manor, Gurnee.

LASALLE

PARTY. A musical review, "Party of Six" with stars from Northwestern University WAA Mu show was the entertainment for the LaSalle County Medical Society Christmas party at Streator.

MACON

MEETING. Dr. Harry F. Dowling, professor of medicine, University of Illinois College of Medicine spoke on "Current Antibiotic Therapy" at the Decatur Club for the Macon County Medical Society, Nov. 25.

McDONOUGH

MEETING. Dr. M. E. Godbey, Macomb, talked on "Hearing Tests" before the McDonough County Medical Society Nov. 28. Dr. Godbey is the newly elected secretary of the society.

ST. CLAIR

DINNER. St. Clair County Medical Society held their annual Christmas dinner dance with the auxiliary at the St. Clair Country Club Dec. 6.

SANGAMON

MEETING. Selwyn Torff, Labor Relations Consultant, Chicago, spoke at the December meeting of the Sangamon County Medical Society. His subject was "Unionism vs. Medicine."

SOCIAL EVENT. The annual auxiliary Christmas party for all physicians and their wives was held on Dec. 7 at the Hotel St. Nicholas in Springfield.

VERMILION

BUSINESS MEETING. The December meeting of the Vermilion County Medical Society for the election of 1959 officers was held in Danville.

WILLIAMSON

NEW OFFICERS. The Williamson County Medical Society met Dec. 2 and elected the following new officers: Drs. Hosmer T. Merrell, Marion, president; James E. Gladson, Herrin, vice president; and Martin M. May, Marion, secretary.

GENERAL

AWARD. Dr. Charles B. Huggins of the University of Chicago, nationally known cancer investigator, received an award at an "All Chicago Salute to Medical Research" dinner Dec. 7. The meeting was sponsored by The Chicago business and professional chapter of the City of Hope Medical Center in co-operation with the Illinois Society for Medical Research.

Dr. Daniel C. Moore, Seattle is now president of the American Society of Anesthesiologists. Dr. Moore, a graduate of Northwestern University Medical School, is returning to Chicago.

LECTURES ARRANGED BY THE ILLINOIS STATE MEDICAL SOCIETY

PAUL K. ANTHONY, clinical associate in pediatrics, Stritch School of Medicine of Loyola University, addressed the Nursery Guild of Ashburn Lutheran Church, December 12, on "Physical and Mental Health of the Pre-School Child."

THOMAS F. KRUCHEK, clinical assistant in psychiatry, Stritch School of Medicine of Loyola University, addressed the Beth Am Social Club of the Jewish Community Centers, January 12, on "Live Longer and Enjoy It."

PAUL C. TRACY, member of the pediatric staff of Children's Memorial Hospital, addressed the Fairview School Parent Teacher Association at Hoffman Estates, January 14, on "Physical Education for Elementary School Children."

RICHARD FRANK, instructor in obstetrics and gynecology, Northwestern University Medical School, addressed the Manor Division of the National Council of Jewish Women, February 18, on "What's New in Obstetrics?"

JACKSON P. BIRGE, Rock Island, Regional Health Officer of the Illinois Department of Public Health, addressed the Stephenson County Medical Society in Freeport, February 19, on a pertinent subject in public health.

THOMAS J. COOGAN, clinical assistant professor of medicine, University of Illinois College of Medicine, the Stock Yards Branch of the Chicago Medical Society, February 20, on "Evaluation of and Treatment of Hypertension."

MARGARET L. PHILLIPS, member of the staff of the Chicago Wesley Memorial Hospital, South Bryn Mawr Wednesday Women's Club, February 25, on "Live Longer and Enjoy It."

DEATHS

ROBERT M. AFFHAUSER*, Chicago, who graduated at Loyola University School of Medicine, in 1922, died August 9, aged 62.

LESTER D. ANDERSON*, Chicago, who graduated at the Chicago Medical School in 1919, died September 5, aged 69, of cerebral hemorrhage. He had served as a member of the staff of the city health department.

WILLIAM J. BAKER*, Chicago, who graduated at Rush Medical College in 1925, died December 3, aged 64. He was chairman of the Department of Urology at St. Luke's Hospital, and professor of urology at Northwestern University Medical School.

HARRY T. BAXTER*, Astoria, who graduated at the University of Illinois College of Medicine in 1914, died October 14, aged 67.

GEORGE J. BILEK*, Chicago, who graduated at Indiana University School of Medicine in 1929, died November 28, aged 55. He was a former chairman of the Department of Surgery at Evangelical Hospital, and a member of the staff of Christ Community Hospital.

HUGH R. BOHANNAN*, Jerseyville, who graduated at the Eclectic Medical College of Indiana, Indianapolis, in 1904, died recently, aged 82.

HENRY H. BOONE*, Chicago, who graduated at the Chicago Medical School in 1919, died September 30, aged 74, of chronic myocarditis and arteriosclerosis.

JAY BAILEY CARTER*, Chicago, who graduated at Rush Medical College in 1925, died December 6, aged 59. He was a member of the staffs of County and Augustana Hospitals, and the author of several books and articles on the heart.

ROBERT I. FIRESTONE*, Brookfield, who graduated at the Western Reserve University School of Medicine, Cleveland, Ohio, in 1944, died November 27, aged 37. He was assistant in ophthalmology at the University of Illinois College of Medicine.

JADWIGA GLOGOWSKA, Alton, who graduated at Uniwersytet Poznanski Wydział Lekarski, Poznan, Poland, in 1949, died October 6, aged 35, of injuries received in an automobile accident in Madisonville, Kentucky.

RICHARD HOWARD JACKSON, Chicago, who graduated at Meharry Medical College, Nashville, in 1922, died September 13, aged 72, of chronic myocarditis.

THEODORE S. KAMMERLING*, Chicago, who graduated at the University of Illinois College of Medicine in 1904, died November 20, aged 77. He was a former member of the faculty of the Chicago Eye, Ear, Nose and Throat Infirmary.

EMMETT L. LEE*, Aurora, who graduated at Rush Medical College in 1909, died November 14, aged 76.

MARVIN S. LEVINSON, Chicago, who graduated at the Chicago Medical School in 1954, died November 21, aged 29. He was a senior resident physician at Michael Reese Hospital at the time of his death.

IDA I. MARCUS, Chicago, who graduated at Deutsche Universitat Medizinische Fakultat, Prag, Czechoslovakia, in 1920, died December 3, aged 64.

THOMAS I. MOTTER*, Oak Park, who graduated at the Chicago Homeopathic Medical College in 1897 and at Rush Medical College in 1899, died November 20, aged 86. He was a trustee of the West Suburban Hospital, which he helped found.

WILLIAM G. SACHSE*, Morris, who graduated at Rush Medical College in 1908, died recently, aged 76.

MAX SCHMIDHOFER*, Chicago, who graduated at Jenner Medical College, Chicago, in 1913, died November 11, aged 74. He was medical examiner at Fifth Army Headquarters.

J. DONALD SHOEMAKER, Mount Olive, who graduated at the Chicago Medical School in 1947, died in the Community Memorial Hospital, Staunton, September 23, aged 50.

J. ZEPH STANLEY*, Carmi, who graduated at the College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, in 1910, died in the Deaconess Hospital, Evansville, Indiana, September 15, aged 76, of coronary occlusion. He was a member of the staff of the Carmi Township Hospital.

FRANCIS E. STREYSMAN*, Oak Lawn, who graduated at Loyola University School of Medicine in 1931, died November 15, aged 65. He

*Indicates member of the Illinois State Medical Society.

was a member of the staff of Holy Cross Hospital.

CLAUDE O. TEMPLE*, Chicago, who graduated at the Chicago Medical School in 1937, died November 30, aged 50. He was a member of the staffs of County and St. George's Hospitals.

MILO E. VACIN*, Riverside, who graduated at the University of Illinois College of Medicine in 1929, died November 22, aged 57. He had been president of the medical staff of Bethany Hospital and he had served for 22 years as dean and treasurer of Worsham College of Mortuary Science.

MARY FITZBUTLER WARING, Chicago, who graduated at Louisville National Medical Col-

lege in 1898 and at the Chicago Medical School in 1923, died December 3, aged 96. She was a former Chicago public school teacher and president of the National Association of Colored Women.

WILLIAM R. WESENBERG*, Mound City, who graduated at Vanderbilt University School of Medicine, Nashville, in 1912, died recently, aged 69.

ARTHUR R. WHITEFORT*, St. Elmo, who graduated at St. Louis University School of Medicine in 1905, died recently, aged 78.

*Indicates member of the Illinois State Medical Society.

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Antimalarials in lupus

The reported uses of the antimalarials in the treatment of lupus erythematosus are legion. The consensus is that they have been proved effective in the treatment of chronic discoid lupus erythematosus. Again, the relapse rate after withdrawal of treatment is high; however, some remain permanently free of their disease. Others, after relapse, respond again equally well to re-treatment. Some remain refractory. Some fail to respond to one antimalarial drug only to clear promptly when an analogue is tried. Some may still require adjunctive therapy, such as carbon dioxide freezing, to facilitate involution.

In the subacute and acute disseminated forms of lupus erythematosus the findings have been more astounding. Although a case of systemic lupus was treated in Page's original series, grave warnings were soon forthcoming against

the use of antimalarials in acute systemic forms of the disease. Numerous reports, however, continued to appear indicating that they were indeed beneficial in the systemically ill patients. Duboise and Haserick have treated large groups of such patients and feel that antimalarials are useful. Connor successfully treated 12 cases of acute systemic lupus erythematosus with quina-craine and chloroquine, five with concomitant steroid therapy, and seven with antimalarials alone. He ventured the prediction that the antimalarials "may prove superior to steroid therapy in the treatment of lupus erythematosus with respect to life expectancy, complications, and morbidity." In his five very ill patients, antimalarials permitted control with steroid at a much lower dose. *Eugene P. Schoch, M.D. Antimalarials in Lupus. Texas. J. Med. June, 1958.*

The ILLINOIS Medical Journal



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Staphylococcal Pneumonia

W. T. COUTER, M.D., DECATUR

Staphylococcal pneumonia is but one facet of the problem of hospital-acquired staphylococcal infections. There is a growing number of articles in all journals, including lay magazines, concerning the incidence and importance of this problem. The number of hospital admissions due primarily to staphylococcal infections has not shown any recent marked increase; the incidence of such infections arising within the hospital has. The importance of such infections is shown by a study by Godfrey and Smith¹ in the University Hospital at Iowa City where 4 per cent of the autopsies for 1956 were due primarily to staphylococcal disease and in another 14 per cent staphylococci had contributed materially to the patient's death. All in all there were some 129 deaths in 1956 in which staphylococci were involved either primarily or secondarily.

In a similar study at the 350 bed King County Hospital in Seattle, Wysham and Kirby² found some 38 hospital-acquired staphylococcal infections a month and of these, six patients died. The authors calculated that the yearly incidence of hospital-acquired staphylococcal disease was greater than the yearly incidence of poliomyelitis in the state of Washington, and the number of deaths far greater. This problem has been developing slowly over the past decade and its magnitude has not become apparent until recently.

Presented before the Section on Medicine, Illinois State Medical Society, May 22, 1958, Chicago.

The primary offender in hospital-acquired staphylococcal infections has been the so-called "tame" or "hospital" staphylococcus. This is a coagulase-positive, hemolytic *S. aureus* of the phage group III. With some variation this organism is resistant to penicillin, streptomycin, and the tetracyclines; is less resistant to Chloromycetin® and Erythromycin®; and is fairly sensitive to Bacitracin®, Novobiocin®, Carbomycin®, and Neomycin®.

Surveys have consistently demonstrated that this organism is present in nose and throat cultures of otherwise healthy hospital personnel. Eighty to 95 per cent of physicians, nurses, and attendants harbor staphylococci in the anterior nares and 60 to 75 per cent of these have been resistant to many antibiotics³. To a far lesser degree, these same organisms are found in the general population outside the hospital. This organism is unique in its power to survive; it may live for months in blankets or mattresses. The air itself acts as a medium of transference and shaking out blankets may disseminate the micro-organisms. The existence of such a large reservoir of pathogenic staphylococci renders likely the possibility of staphylococcal parasitization of the hospitalized patient.

The widespread use of antibiotics has been held partially responsible for the growing incidence of hospital-acquired staphylococcal disease. Antibiotics have been widely used for prophylac-

tic reasons but that this plan is not only fallacious but actually dangerous is shown by a recent study by Petersdorf and his colleagues at Johns Hopkins Hospital⁴. Between November 1955 and February 1957, all unconscious patients were placed into two groups. One received antibiotics—namely, penicillin, streptomycin, or the tetracyclines; the other received none. Although only a few patients had hemolytic staphylococci on nose and throat cultures on admission, such organisms appeared in 85 per cent of all comatose patients during hospitalization. Severe secondary bacterial infection occurred only in the group receiving antibiotics; these were infections from either hemolytic staphylococci or gram negative rods. Pulmonary complications occurred in 45 per cent of the prophylactically treated group whereas pneumonitis occurred in only 15 per cent of the untreated. The strains of micrococci (hemolytic staphylococci) isolated from the treated group were more resistant to antibiotics than those isolated from the controls.

Knight and associates⁵ have shown that the administration of an antistaphylococcal drug significantly increases the chances of the hospitalized patient becoming a carrier of a strain of "hospital staphylococci" resistant to antibiotics. A patient entering the hospital with an antibiotic sensitive strain of staphylococci generally maintains that strain throughout his hospital stay. In contrast, patients receiving either penicillin or a tetracycline tend to become carriers of staphylococci predominant in that hospital. It seems evident that hospitalized patients, particularly those receiving antibiotics, can hardly escape from hemolytic staphylococcal colonization. That more patients do not develop staphylococcal disease is remarkable, and the immune mechanism preventing such infection needs further investigation. The wanton use of antibiotics may in some patients add the second link in the pathogenesis of hospital-acquired staphylococcal disease.

Steroid therapy—by changing the host-parasite relationship in as yet some unknown manner—has been implicated as a factor in the increased incidence of such infections. Six patients out of 206 at Iowa City were receiving steroids and of these, three had staphylococcal infections¹. One patient to be reported here had been so primed.

There are two main syndromes of staphylococcal pneumonia. The type to arise outside a hospital occurs as a primary pneumonia in infants

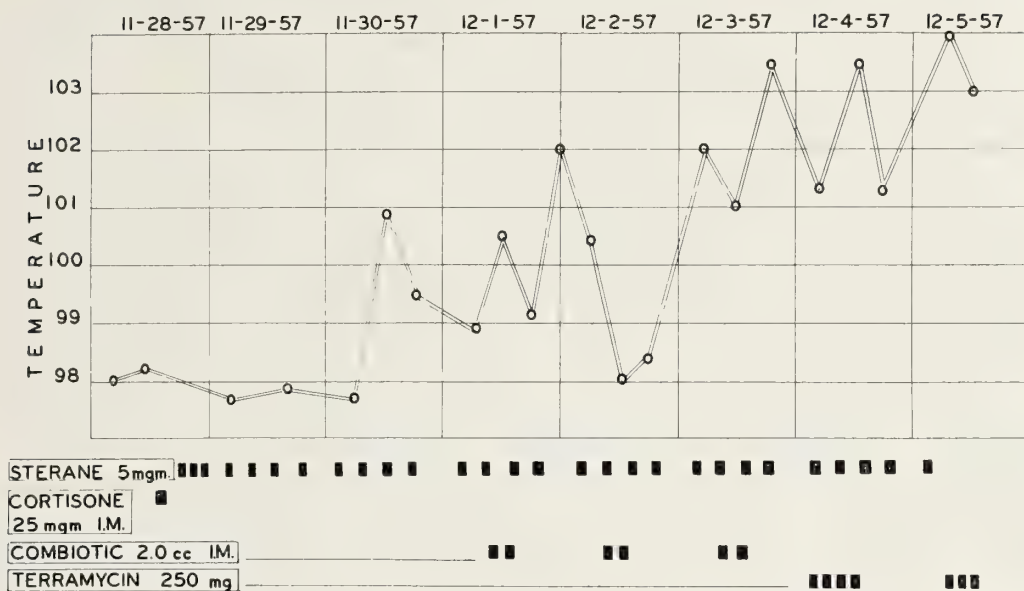
and young adults, and the organism tends to be sensitive to most antistaphylococcal drugs. In the past, this infection tended to follow influenza and could at times be most vicious, as was documented by 152 deaths in 154 healthy young men with staphylococcal pneumonia in a influenza epidemic in an army camp in 1918³. The second syndrome occurs in hospitalized patients and, for the most part, is caused by organisms resistant to antistaphylococcal drugs. This too causes a high mortality, ranging from 50 to 90 per cent. The debilitated patient is most susceptible and it has been stated that staphylococci now hold the role formerly occupied by pneumococci in producing terminal infection⁶. That such a disaster can occur in better risk patients will be shown by the following report:

In a 200 bed hospital over a five week period this winter, three hospitalized patients died from fulminating staphylococcal pneumonia. All three were recovering from the relatively minor condition for which they were hospitalized when the fatal infection occurred. In none was influenza a forerunner and the fatalities occurred in widely separated areas of the hospital.

The first death (Figure 1) occurred in a 56 year old white male, who entered the hospital in a paroxysm of bronchial asthma. He had been receiving 10 mg. of prednisolone daily for 14 months; an acute asthmatic paroxysm had started about 48 hours prior to admission. With the exception of a two year history of asthma and nasal polyps, and an acute depression in 1955, his past medical history was noncontributory. Physical examination on admission was essentially negative except for an elevated blood pressure of 150/110, a respiratory rate of 30, a pulse rate of 118, musical rales in all lung fields, and labored breathing. His admission blood studies revealed a hemoglobin of 16.1 gm., or 103 per cent, a white blood cell count of 8,000, a hematocrit of 48, and a differential of 76 per cent segmented polymorphonuclear cells, 1 per cent band cells, 14 per cent lymphocytes, 5 per cent eosinophiles, and 4 per cent monocytes. The urine and Kahn were negative. He improved until the third hospital day, when fever was first observed. On the fifth day, bloody sputum and extreme dyspnea were noted. On this day the white blood cell count was 5,800 with a differential of 65 per cent segmented polymorphonuclear cells, 9 per cent band cells, 15 per cent lymphocytes, 1 per cent

♂ AGE 56

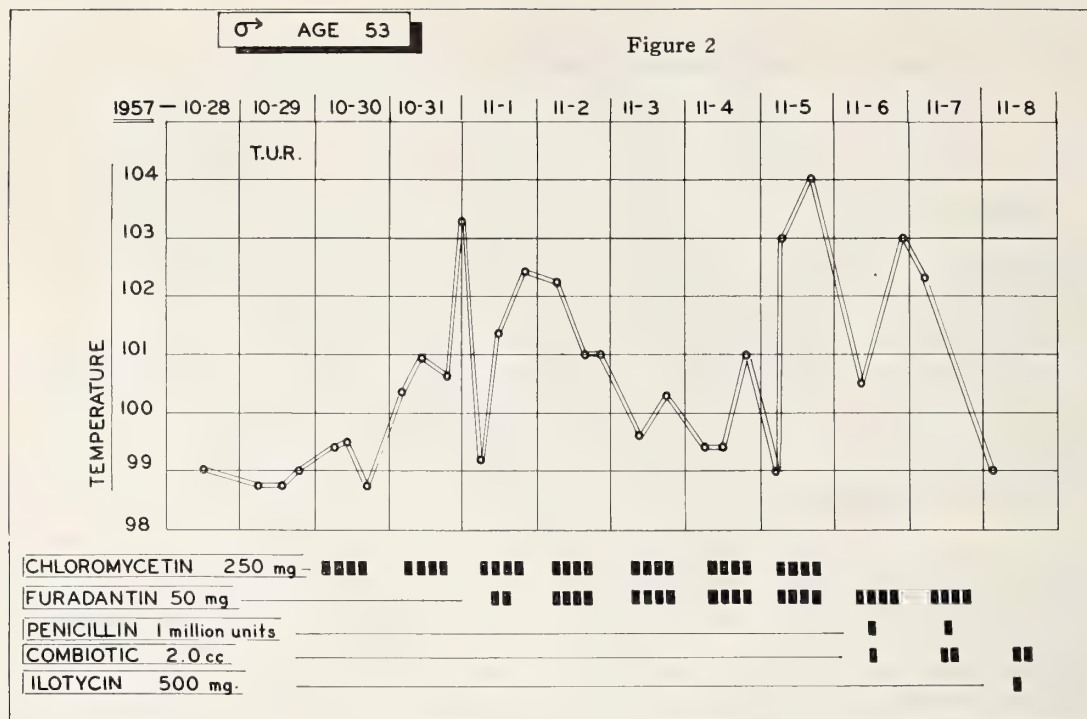
Figure 1



band cells, and 10 per cent monocytes. On this same date chest X-ray showed emphysema but no pneumonitis. He received 20 mg. of Sterane® throughout his entire hospital stay, and over the last 36 hours he received 40 mg. Starting the second day of fever, he received intramuscular penicillin and streptomycin; oral Terramycin® was substituted the final few hours. In spite of other supportive therapy his course was swiftly and relentlessly downhill with death occurring about 100 hours after the first appearance of fever. No sputum cultures were obtained. Postmortem examination showed that the primary cause of death was a hemorrhagic necrotizing bilateral pneumonitis. The microscopic sections showed numerous coccal colonies around the periphery of small abscesses. The adrenals were normal.

The second fatality (Figure 2) occurred in a 53 year old white male admitted for a transurethral resection. He had been treated as an outpatient for some months prior to admission for a persistent cystitis and prostatism and had received sulfonamides and Mandelamine® during that period. His past medical history was essentially noncontributory except for the history of persistent genitourinary difficulty dating back to the discovery of a urethral stricture in 1931. Physical examination was normal except for a

two plus prostatic hypertrophy. On admission, blood studies revealed a hemoglobin of 16.1 gm., or 103 per cent, a white blood cell count of 7,400, a hematocrit of 47, and a differential of 57 per cent segmented polymorphonuclear cells, 33 lymphocytes, 6 monocytes, 3 eosinophiles, and 1 band cell. The urine showed 15-20 white blood cells, and 5-10 red blood cells per high power field. The blood nonprotein nitrogen was 41 mg. per cent and the Kahn negative. Twenty-four hours after admission a transurethral resection and vasectomy were performed. Continuous fever first appeared on the second postoperative day. He received Chloromycetin® and Furadantin® throughout most of his hospital stay. On the sixth postoperative day fever had almost vanished and he had no complaints. Thereafter the temperature rose and chest pain and dyspnea appeared. A chest X-ray on the eighth postoperative day revealed a right middle lobe pneumonia. Penicillin and streptomycin were substituted for chloromycetin the last few days. Energetic measures during the last few hours were ineffectual and the patient expired on the tenth postoperative day about 96 hours after he seemed well on the road to recovery from his operation. A sputum culture obtained shortly prior to death showed many colonies of *Staphylococcus aureus*, which were sensitive to Erythromycin®, Bactracin®, Aureomycin®, and Matromycin® and resistant to



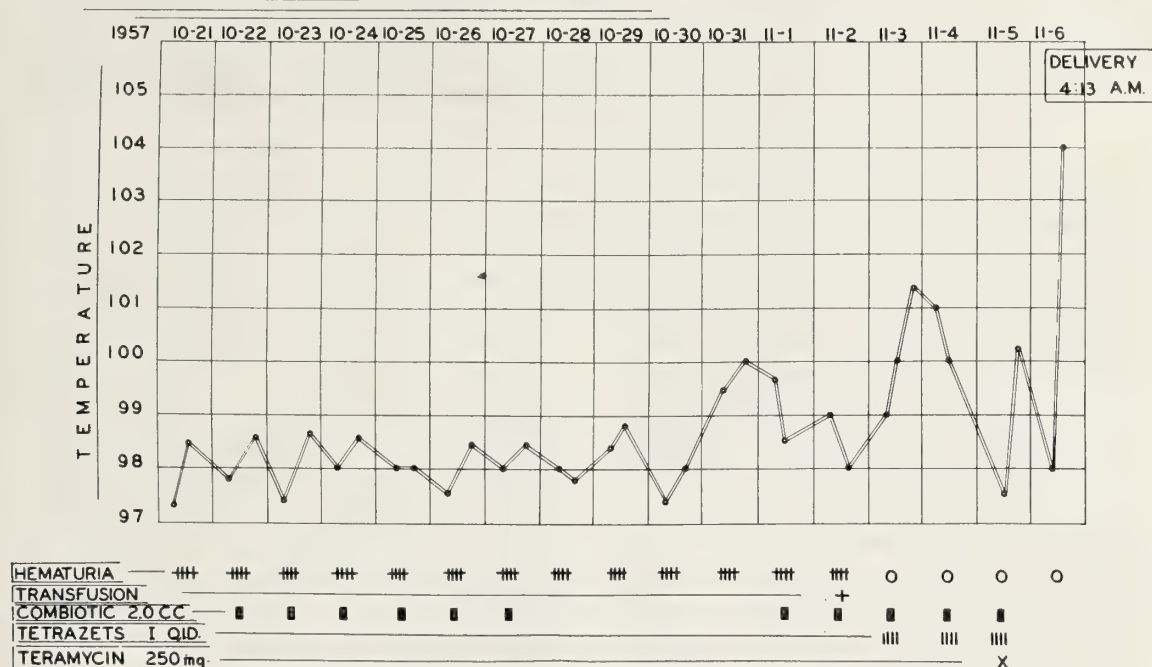
sulfonamides, penicillin, and Chloromycetin® among others. Autopsy revealed the primary cause of death to be a severe bilateral bronchial pneumonia and the sections again showed areas of multiple small abscesses with coccal colonies.

The third fatality (Figure 3) occurred in a 22 year old female, who expired about 20 hours after delivery. She was admitted primarily because of gross hematuria without constitutional symptoms occurring during her eighth month of pregnancy. The past medical history was uneventful and her pregnancy up until the morning of admission had been without incident. That morning she noticed coffee-colored urine and was admitted for observation. Physical examination revealed nothing save an eight month pregnancy. On admission the blood studies showed a hemoglobin of 11.4 gm. or 73 per cent, a white blood cell count of 7,500, a microhematocrit of 34, and a differential of 53 per cent segmented polymorphonuclear cells, 44 lymphocytes, and 3 monocytes. The admission urine was grossly bloody with a two plus albuminuria, a concentration of 1.011, and no pyuria. The N. P. N. on admission was 31 mg. per cent; subsequent similar determinations were all normal. Repeated urines through the eleventh hospital day were grossly bloody; thereafter, there was no hematuria. On the tenth hospital day the C reactive protein was

positive one plus and sedimentation rate was 24 mm. per hour corrected. Through her first nine hospital days she was comfortable and asymptomatic except for the persistent gross hematuria. She received prophylactic penicillin during most of this period. Cough and fever were first noticed on the eleventh hospital day and penicillin was restarted. She received one pint of blood on the twelfth hospital day, with improvement. On the thirteenth day fever reappeared, along with a cough and chest pain. On the fourteenth hospital day, chest X-ray showed a patchy zone of pneumonia in the lingular portion of the left upper lobe. There was no great change on the fifteenth hospital day although she continued to complain of dyspnea, chest pain, and cough. A sputum culture showed many colonies of Staphylococcus aureus, sensitive only to Chloromycetin® and Erythromycin®. She delivered a living baby at 4:13 a.m. on the sixteenth hospital day. Thereafter, her decline was rapid with marked hemoptysis, apprehension, and dyspnea. Respirations ceased at 12:47 p.m., or about 20 hours after delivery. During her last few hours, she received Ilotycin®, Albamycin®, and Terramycin® in addition to supportive measures. Subsequently the baby developed a staphylococcal rhinitis and many staphylococcal skin abscesses. This organism showed a pattern of sensitivity similar to the

♀ AGE 22

Figure 3



mother's. Autopsy showed severe bronchial pneumonia of the left lung and severe edema and congestion of the right lung. Some sections showed small abscesses. The genitourinary tract showed no lesion that could be held responsible for the gross hematuria except for a very small renal cystic structure, suggesting connective tissue that had undergone decidual reaction.

SUMMARY

Staphylococcal pneumonia, particularly in a hospital patient, represents a grave threat to life, and this threat is present now in all hospitals. It is highly important to keep this possibility in mind, and the appearance of clinical pneumonia in a hospital patient, especially in those already on steroids or antibiotics, should be regarded as a staphylococcal pneumonia until proved otherwise. As staphylococcal pneumonia is a necrotizing process, causing multiple small abscesses, treatment during the first few hours is mandatory. During the first few hours of such a pneumonia, it is impossible to distinguish it clinically from any more benign bacterial pneumonia, and if treatment is to be successful vigorous therapy during those first few hours is essential.

As soon as a clinical diagnosis of pneumonia is made, sputum and sensitivity studies should be started; then energetic treatment of this

pneumonia with antistaphylococcal drugs should be undertaken during the time needed to confirm the diagnosis. As certain strains of staphylococci tend to be constant and predominant in any one hospital, the choice of antibiotics might be determined by data already collected on previous cases by the hospital laboratory. Vigorous treatment by a battery of such antibiotics to which other staphylococcal cultures have been sensitive will not endanger the patient if the diagnosis is not confirmed. If confirmed, such therapy may mean the difference between a normal living patient, a permanent respiratory cripple, or a fatality.

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Advances in Medical Treatment of Glaucoma

WILLIAM H. MIDDLETON, M.D., ALTON

IN INCREASE in fundamental knowledge of any disease process usually leads to improved methods of therapy. Thus in glaucoma, advances in our basic knowledge, particularly in the areas of aqueous secretion and the outflow mechanism have led to the development of many new therapeutic agents. While several new and potent miotic drugs recently have been introduced, more interest has been shown in drugs that lower intraocular pressure by inhibiting aqueous secretion. These drugs may be divided into 2 groups: (1) compounds that inhibit carbonic anhydrase, and (2) a miscellaneous group of drugs that inhibit aqueous formation by other mechanisms as yet unknown.

I. CARBONIC ANHYDRASE INHIBITORS

A. Diamox®

The decrease in intraocular pressure in man by the systemic administration of acetazolamide (Diamox), was first reported by Becker in 1954.¹ Interest in this new drug was immediate and widespread among ophthalmologists and numerous reports on its clinical use soon appeared^{2,3}. The drug also has proved a valuable laboratory tool in the study of aqueous humor dynamics and there is now general agreement on most of its actions. These include a lowering of intraocular pressure, a decrease in aqueous humor pH and bicarbonate excess, an increase in ascorbate concentration of the aqueous, and a decrease in the rate of aqueous secretion⁴. Thus Diamox lowers intraocular pressure without changing the outflow facility. Its hypotensive effect is additive to that produced by miotics, and Diamox should be considered as a supplement or adjunct to miotic therapy. It is only in the occasional

rare case of pure hypersecretion glaucoma that the use of Diamox alone may be justified.

In the past four years the clinical use of acetazolamide in the therapy of the glaucomas has become clarified. It is valuable in acute angle closure glaucoma when used pre-operatively to lower tension and prepare the eye for surgery. However, when used in the treatment of chronic narrow angle glaucoma as a substitute for surgery it is almost uniformly unsuccessful. Furthermore, as Chandler has warned, such therapy eventually leads to closure of the angle by anterior peripheral synechiae so that the case can no longer be cured by peripheral iridectomy and one must resort to the less desirable filtering procedures⁵.

Acetazolamide has one of its greatest fields of usefulness in the treatment of secondary glaucoma. If ocular tension can be controlled by Diamox and the fundamental disease process cured, undesirable surgical intervention to control the tension can be avoided.

Several long term clinical studies have shown that certain selected patients with chronic simple glaucoma can be controlled medically by the addition of Diamox to their miotic regime⁶. Two-thirds of the failures in long term therapy of open angle glaucoma are due to intolerable systemic side effects, the most common being anorexia, weight loss, and excessive fatigue. One of the more serious side effects is the occurrence of ureteral colic and the formation of calculi in the urinary tract. This serious complication, which is being reported with increasing frequency, may result from decreased citrate excretion in the urine which occurs with Diamox therapy⁷.

One of the most common errors in Diamox administration is incorrect dosage. The average adult dose is 250 to 500 mg. every 4 to 6 hours. As 500 mg. produces maximum inhibition of aqueous secretion in man, larger doses are not indicated. On the other hand, a dose of less than

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250 mg. every 6 hours will seldom give adequate control except in occasional cases of secondary glaucoma. In the acute glaucomas, when the patient is nauseated, the initial doses of Diamox can be given parenterally.

Because of the systemic side effects, the unnecessary use of Diamox is to be condemned. Such unnecessary uses would include: (1) the addition of Diamox to the therapy of a patient already adequately controlled on miotics; (2) the substitution of Diamox in place of miotics; and (3) long term therapy of a unilateral absolute glaucoma⁸.

B. Cardrase®

Ethoxzolamide (Cardrase), another potent carbonic anhydrase inhibitor, recently has become available for glaucoma therapy. Its actions are similar to Diamox but it is twice as potent⁹. The dosage for Cardrase is, therefore, approximately one-half the dose for acetazolamide (125 to 250 mg. every 4 to 6 hours). Unfortunately, in spite of the lower milligram dosage, patients on long term therapy have essentially the same systemic side effects as with Diamox. However, an occasional patient will tolerate Cardrase better than acetazolamide; others note fewer side effects with Diamox than with Cardrase.

C. Neptazane®

Neptazane is another carbonic anhydrase inhibitor which is under investigation for the therapy of glaucoma. It is similar in structure to acetazolamide but lowers intraocular pressure in one-third to one-fifth the dosage because it penetrates the aqueous humor more effectively. It is excreted more slowly than Diamox and, therefore, can be given every 8 hours. Neptazane seems to produce less in the way of side effects and is well tolerated by some patients who are unable to take Diamox⁴.

II. OTHER SECRETORY INHIBITORS

Several pharmacological agents exert a hypotensive action when applied topically to the eye. One such drug is Vasopressin®, the antidiuretic principle of the posterior pituitary. The mechanism of action is unknown. Vasopressin is a useful adjunct in the treatment of the acute glaucomas, but the rapid development of resistance precludes its use in long term therapy¹⁰.

Of greater value are several of the sympathomimetic amines. Becker and Ley recently have reported on the use of topical epinephrine in the

therapy of the chronic glaucomas¹¹. They found that the addition of one drop of epinephrine bitartrate 4½% once a day to the patient's regular miotic therapy reduced intraocular pressure an average of 13.4 mm. as the result of a 37% suppression of aqueous humor formation. Of even greater interest was the finding that the hypotensive effect of epinephrine is additive to the fall produced by Diamox, and the combined use of these drugs produces a greater fall in pressure than can be obtained by either agent alone. This provides a possible means for controlling severe chronic glaucoma that has not responded well to either of these secretory inhibitors alone. Topical epinephrine produces some transient burning and local irritation, but usually can be tolerated. Its use is contraindicated in angle closure glaucoma because of the possibility of pupillary dilatation. Epinephrine solutions should be made up with an anti-oxidant and kept refrigerated to avoid deterioration.

Isuprel® is a potent sympathomimetic amine that suppresses aqueous secretion. It does not dilate the pupil, but its use in glaucoma is limited because of local irritation and systemic toxicity⁴.

III. ADVANCES IN MIOTIC THERAPY

It should be emphasized that miotics are still the most important drugs in the medical treatment of glaucoma. In chronic simple glaucoma they lower intraocular pressure by improving the outflow facility. Miotics thus act directly on the basic outflow defect. Prepared solutions of the common miotic drugs are now available from several pharmaceutical companies. These preparations have the advantages of sterility, proper buffering, and stability. There is some evidence that the addition of 0.5% methylcellulose to the solution increases the intensity and duration of miosis¹².

Research on new miotic drugs is directed toward stability, lessened toxicity and side effects, and greater effectiveness. One of the most promising of the new miotic drugs is Phospholine Iodide®, an organic substituted quaternary ammonium compound. Recent reports from several clinics have shown it to be an effective, long acting miotic that will control intraocular pressure in some eyes unresponsive to other miotics^{13,14}. Tonographic studies have shown it to produce dramatic improvement in outflow facili-

ty in many patients¹⁴. Phospholine Iodide has the desirable properties of water solubility and stability. It is used in 0.25% solution usually once a day, preferably at bedtime. Side effects include brow ache, blurring of vision, and nausea, although these usually are less severe than with D.F.P. Long term follow-ups are necessary to determine whether this new agent will maintain its effectiveness, or if resistance will develop on prolonged therapy. In common with other strong miotics, it is most useful in aphakic and open angle glaucomas. It should not be used in angle closure glaucoma.

IV. SELECTION OF CASES FOR MEDICAL THERAPY

Surgical therapy is indicated in certain types of glaucoma. Thus, medical treatment is ineffective in congenital glaucoma and the treatment of choice is goniotomy. Angle closure glaucoma is primarily a surgical problem, that can be cured by peripheral iridectomy if treated early. In this type of glaucoma, medical therapy is useful in an acute congestive episode to lower tension and prepare the eye for surgery. It also may be used postoperatively in an eye where iridectomy or a filtering procedure has not completely normalized tension.

On the other hand, secondary glaucoma and chronic simple glaucoma are primarily medical problems and should be controlled by medical therapy if possible. Every ophthalmic surgeon is well aware of the shortcomings and complications of glaucoma surgery on these cases. With the many new drugs now available or under investi-

gation, fewer and fewer of the secondary or chronic simple glaucomas need come to surgery.

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A Report on Brain-Damaged Children

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THIS study was initiated by the Springfield Mental Health Center in September, 1955, as the first part of a report on brain-damaged children. Forty brain-damaged children, ranging in age from 5 through 12 years, were drawn from routine clinic admissions and studied from the standpoint of total environment and behavior. A staff of psychiatrists, psychologists, and social workers—each using his own techniques—investigated etiological factors and resulting effects.

In this study we were interested mainly in children whose actions and behavior were different from that of others because of organic brain damage. These children exhibited general hyperactivity, impulsive behavior, restlessness, emotional instability, and lack of inhibitions. In general, they were socially unaccepted. The ratio of male to female was three to one for brain-damaged children. The usual clinic intake shows a ratio of two to one. This raises a question as to whether there actually is a greater number of brain-damaged males, or whether a trend exists in our society to observe female behavior less acutely.

The majority of the parents of the group studied were judged as average or above intellectually, economically, and socially. The percentage of mentally defective children was high—32.5 per cent. The normal expectancy is 2.2 per cent.

Results of this study show that brain damage is an aggravating factor in all environmental and social aspects of the youngster's life pattern. The boy or girl with brain damage has all the problems that other children have to solve, plus the problems associated with his disturbances caused by the malfunctioning of the brain. In his effort to adjust, he adopts the behavioral pat-

tern that gives him the greatest protection against psychological pain because of the difficulty in controlling his impulses. In comparing the intelligence and social adequacy of this group with an unselected group, these children probably have much more stimulation than the typical dull child who comes from a familial background of mental deficiency. Brain damage plays a causative role in behavior. It can be influenced beneficially or adversely by environmental circumstances. Situations and environments that would not disturb the normal child can overstimulate brain-damaged children, resulting in hyperactive behavior. Where emotional tensions are prominent, overactivity becomes exaggerated, whereas in nonstimulating situations, overactivity is kept at a minimum.

Remedies that repair brain damage are at present almost totally lacking. Because of this, specialized methods of teaching need to be employed so that these children can benefit from academic training. There are a number of brain-damaged children, including some in the high average range of intelligence, for whom the community provides no education, according to our current laws. Unless the family can provide private tutoring, any formal education is denied. Some are eligible for mentally handicapped classes, but those who fall outside this range are not.

Intelligence plays a part in brain damage only so far as the damage prevents the thinking process from operating at a maximum. If this group had no organic brain damage, intelligence would tend to follow the normal distribution curve. Since brain damage is exogenous rather than endogenous, parents may be assured that it is unlikely to be an inherited characteristic.

A high percentage of our sample came from broken homes. Since we have already concluded that environmental factors, including marital discord, contribute to the exacerbation of brain

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damage, we may for the sake of argument reverse the logic and speculate as to what extent the homes were broken by the pressure generated by typical behavior in the brain-damaged child who carries the superficial appearance of normality.

Psychological studies were based on the Wechsler Intelligence Scale for Children,¹ Rorschach Ink Blot Test,² Strauss-Werner Marble Board Test,³ Graham-Kendall Memory for Design Test,⁴ and the House-Tree-Person Test.⁵ Four specific studies of psychological tests were completed on this group. Todd's⁶ study revealed no significant differences between the number of verbal responses given by brain-damaged children and those by normal children. Jones and Alexander⁷ developed the Point-Wavering Test, designed to emphasize the greater degree of motility found in brain-damaged children. Hooper⁸ found that Tomblen and Reznikoff⁹ offered the best signs for diagnosing brain-damaged children through the use of the House-Tree-Person Test. The Rorschach Ink Blot Test permitted observations of the brain-damaged patient's approach to problem-solving with emphasis on approach rather than solution. It also revealed the child's considerable need for reassurance. Within the limits of the study, it was difficult to find a typical quantitative response pattern to the Rorschach stimuli. Greater similarity exists between the Rorschach responses of the brain-damaged child and the psychotic or autistic child than those of the neurotic child.

The electroencephalogram provided a quantitative measure of cortical dysfunction. Severe organic impairment, as measured by the electroencephalogram, had little relationship to intelligence level. It was not possible to relate any one type of behavior with any one type or even severity of electroencephalographic abnormality. These children tended to several different types of abnormalities in electroencephalographic tracings that fall within the mental defective group. The most common electroencephalographic pattern found indicated the presence of diencephalic discharges. The EEG was the only measure substantiating the clinical impression that uncontrolled behavior resulted from these discharges. Psychological tests do not present conclusive diagnostic information indicating brain damage in this group. There is some question concerning the significance of diencephalic sei-

zures, since many patients having them do not fit previously conceived patterns of brain damage. It is the child with erratic behavioral manifestations who can be suspected of having diencephalic seizures.

Some of the children have had overt seizures which classify them as epileptic; they should be on anticonvulsant medication. Other children in this group, who do not have overt seizures, may show improvement on adequate doses of Dilantin® and phenobarbital. Phenobarbital is used primarily as a bedtime medication. Occasionally the use of Dilantin and phenobarbital in this type of case may increase hyperactivity. Tranquilizing drugs have been found helpful frequently in reducing the overactivity of brain-damaged children.

Interpretation of etiology and management of brain damage to the parents usually is difficult. They generally are aware of some gross inadequacy before the interpretation is made. However, they may be adamant in denying its existence. The family is generally upset when they become aware for the first time that the child's most vital organ to human endeavor—the brain—has been damaged. After the initial reaction, they begin to seek causes for this catastrophe. An effort should be made to ease guilt feelings when they exist. In some cases, the parents will be relieved to find an organic basis for the child's problems, since this excuses them from guilt feelings and provides a more personally acceptable rationale for the child's behavior. Parents tend to react to the diagnosis and its implications in a pessimistic manner but this can be alleviated when they realize that habit training and carefully planned education equips the child to adjust to society. As the youngster responds to training, the parents become more accepting and optimistic, which enhances the child's adjustment. Also, there are indications that brain damage is not static, because growth and maturation bring changes. There seem to be fewer brain-damaged adults than children. Either these persons develop the behavior and attitude of the normal person, or they fit into other diagnostic categories. As adults, they apparently pick up sufficient social veneer to make them less distinguishable for their differences.

Our treatment of the formal schooling of brain-damaged children is somewhat cursory, because of the abundance of excellent material

prepared in the last several years by educational institutions actively engaged in specific training and research in this area of the brain damage problem. Most of the previous studies have dealt with medical or educational management. Strauss¹⁰ in his work at the Cove School, stipulated a completely controlled environment in order to achieve maximum learning. Results of this study would tend to confirm the Strauss approach in this respect. Our study bears out the concept which states that a 24 hour a day controlled environment is necessary until the child has developed sufficient skills at managing and understanding his own assets and limitations. These principles have been found sound in educating children with other handicaps.

At the beginning of this study, three major questions were formulated. The first dealt with determining whether specific behavioral symptoms were associated with certain types of organic conditions. Evaluation of the completed research showed little relationship between behavioral symptoms and conditions traceable to certain sections of the brain. Brain damage can be diagnosed tentatively by observed behavior because of consistent symptomatology. But the degree of damage and the prognosis require more intensified investigation, using specialized techniques, including careful evaluation of the presenting symptoms, the use of psychological tests, and the use of the EEG.

The answer to the second question—evaluation of importance of endogenous and exogenous factors in the development of the brain-damaged child—was elusive. The child begins life with certain fundamental characteristics from which his personality is developed. It is shaped by many forces in his environment. When brain damage occurs, the personality must adjust to the limitations and distortions superimposed upon it. If the exogenous factors are properly manipulated, much can be done to minimize the defect and improve the status of the organism. On the other hand, endogenous defects are irreversible. The personality is limited by paucity of meaningful responses to the environment. The child who is constitutionally inadequately endowed develops too slowly to cope with his environment. The brain-damaged child will utilize his intact processes, but his productive energy is diverted and dissipated in his strivings to con-

trol his uninhibited impulses because of malfunctioning of centers of control. Through maturation and growth in the brain-damaged child, adequate utilization of abilities is possible under proper stimulation and learning conditions.

The third question dealt with the brain-damaged child's social maladjustment, which we know is the result of conflicts between his instinctual needs and society's demands. Social adjustment is dependent upon the ability to meet social expectations and repress basic drives by understanding how to respond. The brain-damaged child acts impulsively and uses poor judgment which gradually eliminates him from social groups. Frustration and ostracism result from failure on the part of adults to comprehend the implications of this disorder. Social adjustment results from a person's feeling comfortable in his environment. The brain-damaged child usually is aware that he does not respond to stimuli as successfully as those around him. Regardless of intellectual level, this child should be considered a handicapped child, who responds to stimuli differently. Social adjustment of the brain-damaged child can be enhanced by control of his environment through understanding his problem.

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The Pathogenesis of Peptic Ulcer

LESTER R. DRAGSTEDT, M.D., CHICAGO

Dr. Robert Adolph: Today's seminar is concerned with the pathogenesis of peptic ulcer, and our speaker is Dr. Lester R. Dragstedt, Chairman of the Department of Surgery at The University of Chicago. Dr. Dragstedt, with his broad background in pharmacology, physiology, animal experimentation, and clinical surgery, is certainly in a position to review this subject in the light of his own experiences.

Dr. Lester R. Dragstedt: The idea that gastric and duodenal ulcers are caused by the digestive action of the gastric juice has been accepted widely. The adoption of the term "peptic ulcer" for these lesions is an expression of this point of view. Older physicians recognized that under normal conditions the stomach is not digested away. They postulated that in ulcer patients there occurs a local decrease in the resistance of the mucous membrane to the digestive action of the gastric content. Virchow and Hauser postulated that such a local decrease in resistance could be brought about by thrombosis or embolism in one of the end arteries supplying the gastric or duodenal mucosa. The sharply punched out character of the ulcer seemed to bear out Virchow's suggestion that the lesion is caused by infarction of the gastric wall. However, in subsequent years it has proved difficult to secure evidence supporting this theory that ulcers are due to local decrease in resistance of an area of the mucosa. If we tie off the blood vessels to the stomach, no damage results because of the wide and effective collateral circulation. When the critical point is exceeded, a large part of the stomach becomes gangrenous but chronic progressive peptic ulcers do not appear. When partial gastric resection was adopted as a treatment for duodenal ulcer, we were surprised to observe that the blood vessels in the resected stomachs, for the most part, were normal and that thrombosis and embolism rarely were found. The fact that many duodenal ulcers healed after gastroenterostomy and that new ulcers appeared at the gastrojejunostomy opening also indicated that the ulcer was not caused by a local defect in the

mucosa. For these and other reasons, I have abandoned the concept that peptic ulcers are produced by local decrease in the resistance of the mucous membrane to the digestant action of the gastric content.

I should like to present for your consideration the concept that peptic ulcers usually are caused by hypersecretion of gastric juice: further, that hypersecretion of gastric juice in duodenal ulcer patients usually is of nervous origin and that hypersecretion of gastric juice in gastric ulcer patients usually is of hormonal or humoral origin. The evidence that duodenal ulcers generally are caused by hypersecretion of gastric juice of nervous origin may be summarized as follows.

(1) Duodenal ulcer patients secrete from three to 20 times as much gastric juice in the fasting empty stomach at night as do normal people.

(2) If gastric hypersecretion of this degree is reproduced in experimental animals, typical peptic ulcers appear regularly in the duodenum.

(3) If the vagus nerves to the stomach are

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completely divided in duodenal ulcer patients, hypersecretion of gastric juice in the fasting empty stomach is abolished.

(4) If the vagus nerves to the stomach in duodenal ulcer patients are completely divided and if, in addition, a drainage procedure such as gastroenterostomy or pyloroplasty is added so that stasis of food in the antrum is prevented, ulcers heal and stay healed.

As most of you know, there has been widespread controversy about the vagotomy operation both here and abroad since I introduced it in 1943. I believe it is fair to say, however, that this controversy has revolved about the question - "Is vagotomy, combined with a drainage procedure, as efficient in the treatment of duodenal ulcer as is subtotal gastric resection?" No surgeon that I know of, who has performed even 25 vagotomy operations, questions the fact that dividing the vagus nerves exerts a healing effect on the ulcer. In our experience this healing effect is directly proportional to the reduction in the secretion of gastric juice that is produced by cutting the vagus nerves.

The concept that gastric ulcers are caused by hypersecretion of gastric juice of humoral or hormonal origin has come about partly as a result of some reflection on the surgical treatment of gastric and duodenal ulcers and in part, as a result of laboratory experiments. There are significant differences between gastric and duodenal ulcers, and several of these have led some writers to suggest that gastric ulcers are not peptic ulcers at all, but are caused in some other way. Statistical studies have indicated that gastric ulcers occur about a decade later than duodenal ulcers, as a rule. The incidence of duodenal ulcer in males exceeds that in females by a ratio of nine to one, whereas in gastric ulcer the incidence in the two sexes is more nearly the same. However, in my judgment the most significant difference between gastric and duodenal ulcer is seen in the pattern of gastric secretion. Duodenal ulcer patients secrete from three to 20 times as much acid in the fasting empty stomach at night as do normal people. But gastric ulcer patients put out less acid in the fasting empty stomach at night than is the case with normal people. I suspect that this low output of acid in the fasting empty stomach at night in gastric ulcer patients has led people to believe that these ulcers are not peptic in origin, a view that I be-

lieve is erroneous. Surgeons became impressed with profound differences between gastric and duodenal ulcers in their response to surgical treatment. When gastroenterostomy was the common operation for duodenal ulcer, a high incidence of gastrojejunal ulcer was encountered. However, when gastroenterostomy was performed for gastric ulcer, the incidence of gastrojejunal ulceration was low. When gastric resection was introduced in the treatment of peptic ulcer, usually only the lower fifth of the stomach was resected. After this operation, there was a relatively high incidence of stoma ulcer when the operation was performed in duodenal ulcer patients, but when it was performed in gastric ulcer patients, stoma ulcer rarely or never developed. For these reasons, it became the practice to resect more and more of the stomach in the duodenal ulcer patient, until finally a subtotal gastric resection became the standard procedure.

When I first employed division of the vagus nerves to the stomach for the treatment of peptic ulcer, I was puzzled by the finding that this operation produced good results in duodenal ulcer patients but not in many patients with gastric ulcer. After several years, a number of these duodenal ulcer patients, whose ulcers had healed after vagotomy alone, returned with new ulcers in the stomach. The fasting night secretion of these patients revealed little or no acid, indicating that vagotomy had been complete and the nervous phase of gastric secretion eliminated.

Pavlov recognized that the stomach would still secrete gastric juice after the vagus nerves were cut if food were placed in the stomach. He thought this was due to local nervous reflexes. However, Edkins, an English physiologist — no doubt influenced by the preceding work of Bayliss and Starling on pancreatic secretin — postulated that this secretion is caused by the elaboration of a hormone, gastrin, from the mucosa of the lower fifth of the stomach when it comes in contact with food. This hormone is liberated into the blood stream and stimulates the gastric glands in the body and fundus of the stomach. Edkins failed to provide convincing experimental data in support of his theory, and consequently it was received with considerable skepticism by other physiologists. However, in recent years, we have secured evidence in our laboratory that provides strong support for Edkins' view.

Vagus denervated Heidenhain pouches were produced in dogs, and the gastric secretion from these pouches was measured quantitatively each 24 hours for a control period of one month. At the end of this time, the antrum of the stomach was excised, and daily measurements of gastric secretion continued as before. After removal of the antrum, the output of acid from the Heidenhain pouch was reduced by more than 90 per cent. Since food still came into contact with the mucous membrane of the esophagus, lesser curvature, and small intestine, it is evident that the humoral factor stimulating the Heidenhain pouch has its origin chiefly in the mucous membrane of the antrum. This experiment is of interest to the surgeon because it shows that the secretion of gastric juice can be practically abolished without depriving the patient of any of the storage part of the stomach.

Further evidence in support of Edkins' view came from transplantation experiments. We made isolated pouches of the entire stomach in dogs with the vagus nerves divided, but with the blood supply to the isolated stomach intact. The esophagus was anastomosed to the duodenum. Very little acid gastric juice was secreted by these isolated denervated pouches. After a control measurement of secretion had been made, we removed the antrum from the isolated pouch and transplanted it as a diverticulum to the transverse colon. To our astonishment, this transplantation produced a profound stimulation of gastric secretion. This made it necessary for us to modify Edkins' view, since it was evident that contact of the antrum of mucosa with feces from which food had been removed by digestion and absorption was an effective stimulant. We then removed the antrum transplant from the colon and transplanted it to the abdominal wall where it could not come into contact with food. Gastric secretion from the isolated fundus decreased markedly. As a final stage in the procedure, the antrum was transplanted to the duodenum as a diverticulum so that it could come into contact with food. When this was done, the output of gastric acid increased markedly but not quite so much as when the antrum was in the colon.

The discovery that transplantation of the antrum into the colon regularly produced marked hypersecretion of gastric juice raised two important questions, (1) What is the cause of this

hypersecretion? and (2) Will hypersecretion of this degree of humoral origin produce a peptic ulcer? We examined the second question first. Gastric hypersecretion was produced in dogs by transplanting the antrum into the colon and re-establishing continuity of the gastrointestinal tract by a Billroth I or a Billroth II procedure. Typical stoma ulcers appeared in these animals in the intestine adjacent to the anastomosis with the stomach. These displayed the sharply punched-out appearance of the ulcers seen in human patients. It is significant that contact with the gastric juice did not produce a generalized erosive gastritis or duodenitis, but rather, a sharply punched-out lesion. This indicates that it is not necessary to postulate local decrease in the resistance of the mucosa to account for the localized character of the lesion. We have no explanation for this curious fact that the application of pure gastric juice to the normal mucosa produces a punched-out lesion like the characteristic peptic ulcer, rather than a widespread erosive gastritis. The ulcers observed in these experiments are significant since stoma ulcers practically never occur when a gastroenterostomy or gastroduodenostomy is performed in a normal dog. Indeed, stoma ulcer rarely or never occurs when a gastroenterostomy is performed in a normal man or in the treatment of pyloric cancer. It is almost exclusively a complication of gastric surgery for duodenal ulcer where hypersecretion of gastric juice is present.

An attempt was made to answer the first question by experiments performed on dogs with Heidenhain pouches and also with an antrum pouch transplanted to the abdominal wall. We found that the introduction of a food such as neutral liver solution into the isolated antrum pouch regularly produced a vigorous secretion of acid from the fundic pouch. However, if the liver solution was acidified before it was introduced into the isolated antrum, no stimulation of the fundic pouch occurred. Distention of the isolated antrum pouch with physiological salt solution produced a vigorous secretion of gastric juice in confirmation of the findings of other physiologists. However, when we distended the isolated antrum with acid, no secretion from the fundic pouch occurred. So we learned that contact of food with the antrum and increased tension within the antrum brought about by antrum

peristalsis, constitute vigorous stimuli for the release of gastrin into the circulation and resultant stimulation of gastric secretion. This release of gastrin from the antrum does not occur if the content of the stomach is acid in reaction at a pH of 2.5.

These findings provide more complete understanding of the mechanism of gastric secretion under normal conditions. Thus, in the interval between meals, a minimal basal secretion of gastric juice occurs. During a 12 hour period, the fasting empty stomach of normal man puts out between 10 and 20 mEq. of hydrochloric acid in a 12 hour period. When food is ingested, gastric secretion is stimulated by impulses in the vagus nerves aroused reflexly by the sight, odor, and taste of food. Gastric secretion is continued when gastric peristalsis carries that food into the antrum and raises tension within the antrum. Both contact of food with the antrum mucosa and antrum motility caused the elaboration of gastrin and its passage into the circulation. Gastric secretion continues until the content of the stomach becomes sufficiently acid in reaction, whereupon further release of gastrin ceases. Further stimulation of gastric secretion is minimal: consequently, damage to the gastric mucosa from excessive acid production is prevented.

It has long been known that the introduction of acid into the first part of the duodenum inhibits gastric secretion. We know also that when acid comes into contact with the duodenal mucosa, it causes the formation of pancreatic secretin which passes into the blood stream and stimulates the secretion of pancreatic juice. Does pancreatic secretin also inhibit gastric secretion? It seems surprising, in view of the large amount of work done on the physiology of pancreatic secretin, that no one, to our knowledge, examined the effect of this substance on gastric secretion. We were able to make this test when we were provided with a supply of relatively pure pancreatic secretin by the Eli Lilly Company. The administration of pancreatic secretin intravenously in a dog provided with a Heidenhain pouch and a total pancreatic fistula caused an abundant secretion of pancreatic juice but an inhibition of gastric secretion. It proved possible to abolish the secretory response of the Heidenhain pouch to food by repeated intravenous injections

of pancreatic secretin. While the preparation of pancreatic secretin we used was sufficiently pure to administer intravenously in human patients, it is not a pure substance chemically. It is conceivable that it contains both pancreatic secretin and a second chemical agent that inhibits gastric secretion.

At all events, we now have further data on the mechanism of gastric secretion in normal people. It is probable that at the beginning of a meal some liquid food, not thoroughly acidified, escapes through the patulous pylorus into the duodenum and stimulates gastric secretion through elaboration of the hormone resembling gastrin from the upper intestinal mucosa. However, shortly after gastric secretion begins, the pylorus contracts and further escape of foods ceases. When gastric digestion is completed and the food is thoroughly acidified, it passes gradually into the first part of the duodenum where it stimulates the production of pancreatic secretin. This then has a twofold effect, stimulating pancreatic secretion and simultaneously inhibiting the further secretion of gastric juice. This should provide a better medium for pancreatic digestion and at the same time, help to protect the mucous membrane against the corrosive effect of the hydrochloric acid of the gastric juice.

Under what conditions does hypersecretion of gastric juice of humoral origin occur in human patients? It is obvious that transplantation of the antrum into the colon is highly abnormal and that nothing resembling this ever occurs in human pathology. It has been known for a long time that patients with duodenal ulcers producing pyloric stenosis are particularly liable to the development of a secondary gastric ulcer. Huber and Huntington among others have called attention to this not unusual complication. In several of their patients the development of gastric ulcer was accompanied by prolonged retention of food in the stomach. It is attractive to speculate that in these patients pyloric stenosis has induced gastric hypermotility and also prolonged contact of food with the antrum mucosa. Both factors should cause an excessive liberation of gastrin and continued stimulation of gastric secretion. In the experimental laboratory we secured evidence in support of this view. My associate, Dr. Stanley Rigler, prepared Heidenhain pouches in dogs and measured quantitatively the daily output of acid from these pouches

for a controlled period of one month. At the end of this time, pyloric stenosis was produced with cellophane tape. Stasis of food in the stomach occurred and each of the animals displayed prolonged and marked hypersecretion. Since it was exhibited by the vagus denervated fundic pouch, the stimulus must be humoral in origin—that is, by the release of gastrin.

Stasis of food in the stomach can occur even without obstruction at the pylorus if the tonus and motility of the stomach are decreased. In experimental animals this can be produced by cutting the vagus nerves to the stomach. In order to find out if such a decrease in tonus and motility could stimulate gastric secretion, we prepared Heidenhain pouches in dogs and made control measurements of the daily output of acid. The vagus nerves to the stomach were then divided, and the output of acid from the Heidenhain pouch increased four or fivefold. This did not occur if the antrum had been excised or if gastroenterostomy had been performed to prevent stasis of food in the stomach. This finding—that the stasis of food in the stomach produced by vagotomy will stimulate the secretion of gastric juice through the excessive release of gastrin—provided an explanation for the ulcers observed as a complication of vagotomy alone in our early experiments. The absence of this complication when vagotomy was combined with an adequate drainage procedure also was satisfactorily explained.

SUMMARY AND CONCLUSIONS

(1) Duodenal ulcers usually are caused by hypertonus of the vagus nerves, producing excessive gastric secretion in the empty stomach and rapid passing of this juice into the less resistant duodenum.

(2) Eighty per cent of gastric ulcers are caused by hypotonus of the vagus nerves, evidenced by decreased secretion in the empty stomach and gastric stasis. Prolonged contact of food with the antrum mucosa causes hypersecretion of gastric juice of humoral or hormonal origin, and prolonged contact with the hyperacid gastric content produces ulcer in the stomach.

(3) Twenty per cent of gastric ulcers occur in patients with pre-existing duodenal ulcers causing pyloric stenosis. These patients display a fasting hypersecretion of nervous origin and

also a prolonged digestive secretion due to stasis of food in the stomach and gastric hypermotility. Both contact of food with the antrum and antrum hypermotility are adequate stimuli for the release of gastrin.

(4) Gastrojejunal ulcers often form after antrum resection for duodenal ulcer but rarely when this operation is done for gastric ulcer. In duodenal ulcer patients, the hyperactive nervous phase of secretion is uncorrected by removal of the antrum, so that ulcers recur. However, in the gastric ulcer patient, the hyperactive gastric phase of secretion is removed when the antrum is excised. The nervous phase of secretion is normal or depressed, and so these patients remain free of recurrence.

(5) The high incidence of stoma ulcer after the Finsterer-Devine operation probably is due to the reflux of food through the duodenum into the antrum. Under normal conditions, the antrum ceases to liberate gastrin and the gastric contents become acid. After this operation, the regurgitating food becomes neutralized by the duodenal secretions so that prolonged liberations of gastrin and excessive secretion of gastric juice occur.

I do not propose to tell you how to treat your ulcer patients. I believe, however, that a better knowledge of the pathological physiology of the stomach in ulcer will contribute to better treatment.

Dr. Robert Ryan, Instructor in Medicine: What is the pathogenesis of peptic ulcer in patients with hyperparathyroidism?

Dr. Dragstedt: The complete role of the endocrine glands in the pathogenesis of peptic ulcer is not yet clear. Drs. Ellison and Zollinger called attention to the association of intractable peptic ulcer and alpha cell tumors of the pancreas. Presumably these tumors secrete a chemical agent, possibly a hormone like gastrin, that can stimulate profuse secretion of gastric juice even after the antrum of the stomach has been removed and the vagus nerves have been divided. Recently we reported a patient with intractable peptic ulcer and with gastric hypersecretion that persisted in spite of complete vagotomy and removal of the antrum. At autopsy, this patient was found to have not only an alpha cell tumor of the pancreas, but also adenomas in the adrenal glands, testis, hypophysis, and parathyroid

glands. Similar cases have been reported from other clinics. We do not know whether one or all of these adenomas are capable of stimulating gastric secretion. Although there seems to be an association of peptic ulcer with hyperparathyroidism, in our experience the results of the injection of Parathormone® on gastric secretion in dogs are equivocal. Some animals displayed a moderate increase in secretion, but in others secretion remained normal or was depressed.

Total diversion of the pancreatic juice to the exterior causes a high incidence of duodenal ulcer in experimental animals. This could be attributed to the loss of the neutralizing effect of the alkaline pancreatic juice, were it not for the fact that after total pancreatectomy ulcers do not occur, although in this case also there is an absence of pancreatic juice in the duodenum.

Injection of extracts from the anterior pituitary have so far yielded no stimulating effect on gastric acid secretion. It has been reported, however, that hypophysectomy produces atrophy of the gastric glands in the fundus of the stomach.

Some years ago, we reported that the gastric secretion from a Heidenhain pouch in the dog during pregnancy is but little changed. However, after termination of the pregnancy, and coincident with the onset of lactation, a tremendous stimulation of gastric secretion occurs. The injection of prolactin, however, did not stimulate gastric secretion.

The patient with cirrhosis of the liver, treated by a portacaval shunt operation, may later develop gastric hypersecretion and a peptic ulcer. Dr. James Clarke has suggested that this may be due to the stimulating effect of a hormone or secretagogue normally inactivated by the liver but becomes free to stimulate the gastric glands when the liver is bypassed.

We see, therefore, a number of causes of hypersecretion of gastric juice with peptic ulcer formation already before us—namely, secretory hypertonus in the vagus nerves, prolonged and excessive function of the gastric antrum, the release of a chemical stimulating agent from alpha cell tumors of the pancreas, and the appearance of a chemical agent that stimulates gastric secretion in the blood of patients after portacaval shunts.

Dr. Hans G. Griebble, Chief Resident in Medicine: How common are peptic ulcers in biliary tract disease?

Dr. Dragstedt: The work of Kapsinow suggests that ulcer may develop if bile is prevented from reaching the duodenum, as could occur as a result of a stone in the common duct. I have seen one patient where a stone in the ampulla may have been responsible for acute duodenal ulcer. The increased incidence of duodenal ulcer is more striking in patients with cirrhosis of the liver.

Dr. Andrew Doig, Research Fellow in Medicine: How does the work of the Scotch physiologists who showed variations in parietal cell populations in peptic ulcer patients fit in with your schema?

Dr. Dragstedt: I believe it is true that there is an increase in the number of parietal cells in patients with duodenal ulcers. I believe this increase in the number of cells is the result of prolonged and excessive stimulation of the gastric glands by impulses in the vagus nerves. In support of this view is the finding that prolonged histamine stimulation led to hyperplasia and hypertrophy of the parietal cells. We know, too, that in other areas, excessive stimulation of glands such as the thyroid, causes hypertrophy and proliferation of cells.

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Newer Concepts of Obesity

G. H. BERRYMAN, M.D., EVANSTON

Of obesity, it has been said that

- 1) Fat people simply like food, and indulge in sprees of overeating.
- 2) Fat people shun the physical activity but maintain the appetite of their adolescent years.
- 3) Fat people are a product of a society where worldly success harbors spectatorship in place of participation, and where food and drink are routinely utilized as pleasant social and business tools.
- 4) Fat people employ eating as an anesthetic for escape from reality—a kind of socially and morally acceptable alcoholism.

These philosophies and part truths or whole truths have been discussed by many students of this chronic widespread disease.¹ The present review will plead *nole contendere* to these superficial antecedents, and will entertain the possibility that it is a derangement of the normal physiologic control mechanisms that is at least partially responsible for middle-aged simple obesity. If this were so, fatness would not be merely a tolltale sign of weak moral fiber, any more than the glycosuria and polydipsia of diabetes mellitus could be ascribed to a sweet tooth and a continuing thirst. Is there any real or suggestive evidence to support the hypothesis that there are metabolic factors which are determinants of obesity, quite apart from the wishful thinking of those whose fate has been to relapse after each "successful" reducing regimen?

We might ask why there are some nutritional substances—salt and water, for example—for which there are physiologic mechanisms to pro-

tect the body against excess—i.e., gustatory distaste or excretion, caloric excess is not felt to be so regulated and indeed seems to add to the vicious cycle of obesity by favoring inactivity.

It is curious that obese children, even at an early age, are less active than their lean or normal counterparts. It is accepted also that fat stores are metabolized poorly in the presence of inactivity.² Which comes first, fatness or inactivity? Does inactivity result in the decline or loss of a regulatory mechanism that ordinarily adjusts caloric intake to caloric expenditure, and thus usually prevents fatness during the youth of individuals who later become fat in middle age? There is evidence that under conditions of low activity the nice balance between energy input and output becomes inoperative. This has been demonstrated in animals physically confined to a small space, and in the human existing at low activity levels.³ Conversely, if obese adolescents can be prevailed upon to exercise vigorously, their body fat content decreases even though no attempt is made to control food intake.

Although no direct relationship has ever been demonstrated between physical inactivity and certain neurohumoral mechanisms which are amenable to study in the animal, one may cast a speculative eye on the possibility that during inactivity, the sharpened consciousness of one's frustrations and emotions may exert definite effects upon primitive hypothalamic responses, resulting in hyperphagia. Whether such psychoneural pathways do exist in the human is unknown, but it has been reported that hyperphagia is exhibited by rats, dogs, and monkeys when minute hypothalamic lesions are induced by experimental means. While *hyperphagia* resulted from damage to nuclei in the ventro medial area of the hypothalamus, conversely a *decrease in appetite* was observed in rats following damage to lateral nuclei of the hypothalamus. Thus, the concept has arisen that, through impulses or secretions from the ventral nuclei, a

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While the Nutrition Committee of the Chicago Heart Association is sponsoring this article, the opinions expressed are those of the author and do not necessarily represent the official view of that committee.

governing or braking effect is exerted upon the appetite-stimulating function of the lateral nuclei. While simple appetite regulation in the animal is undoubtedly far less complex than that of the human, the possibility can be entertained that transient changes in the balance between these contiguous areas in the hypothalamus could be involved in human appetite control, chiefly by effects upon gastric or intestinal motility, which then relate to the feeling of hunger.

There are data of a different type which can be construed as supporting a physiologic rather than a volitional basis for obesity. There are now several reports that a dialyzable polypeptide can be found in the urine of individuals in whom stress is produced by starvation, cortisone administration, or surgery. One group of investigators has reported that the urine of the fasting human contains a fat-mobilizing factor (for mice) which is absent from the same individual's urine when he is not in the fasting state.⁴ This substance, upon injection into mice, resulted in a mobilization of fat from depots, an increase of the total metabolic turnover of fat and the total amount of fat in the liver, and caused weight loss without depressing the appetite, this loss in the form of body fat and water. The human counterpart of these studies also has been carried out with a polypeptide isolated from human plasma, and found to be increased following stress (starvation, cortisone, nephrosis). These studies have been directed mostly towards the plasma lipid-mobilizing effects of this hormonelike substance which was effective in the human recipients upon administration of as small a quantity as 1.2 micrograms intravenously.⁵ These findings do demonstrate that the body elaborates certain materials which are capable of profound effects upon the metabolic turnover of fat. These effects were reportedly blocked by the administration of a high fat diet, but were definite during starvation. This brings to mind that the body also elaborates a substance capable of producing the opposite effect—i.e., lipemia clearance, by means of an enzyme, lipoprotein lipase, which can be evoked by the parenteral administration of small subanticoagulant doses of heparin.

The implication of all these studies is that there may exist endocrine or other internal mechanisms which govern both deposition and mobil-

ization of fat stores in the body. The concept that proneness or resistance to obesity is susceptible to influence by factors other than will power alone is supported also by results of a recent clinical study on the effects upon body weight of a late night 1,000 calorie supplement. It was computed that the caloric value of the tissue gained during the first week of supplementation was 3.4 cal/gm. but that of the seventh week was 6.9 cal/gm. Wide differences were noted among the 12 male college student subjects in their inclination to make compensatory changes in food habits during their regular meals, some of whom demonstrated obesity-resistance—others obesity-proneness. Observations of blood sugar levels and rates of gastric emptying revealed that the "decreased intake of food at mealtime was not readily attributable to a glucostatic mechanism of appetite control, or to a mechanism dependent upon the mechanical effects of nutrients in the gastrointestinal tract."⁶

While further study will be required to delineate the significance of all these factors in the obesity syndrome, it seems clear that both host and environmental factors must play respective roles, and that the price of leanness for the obesity-prone individual will be either self-imposed physical activity and/or self-imposed moderate hunger for most of his adult life. Contrariwise, there will always be a fortunate group whose genetic traits will protect them against obesity, and the exact explanation for their built-in protection may lie in one or more of the several possibilities described—neural, chemical, or metabolic. When the exact mechanism is determined, it may be possible to treat the obesity-prone individual by replacement therapy.

For the present, however, the practical considerations in the prevention and treatment of simple obesity are:

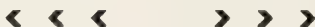
- 1) Recognition and control of the social and emotional factors which make middle-aged obesity a chronic problem.
- 2) Awareness of the individual's caloric requirements, as well as the approximate caloric content of foods, especially those concentrated sources of empty calories.
- 3) Establishment of a program of regular physical activity that is compatible with ability and state of health; perhaps better stated as the avoidance of inactivity.
- 4) Employment of long range reducing diets

which meet basic nutritional requirements for protein, minerals, and vitamins, and which have the objective of long term revision of faulty food habits, rather than spectacular short term results (i.e. avoid fad diets and magic proprietaries).

- 5) For obesity of childhood and adolescence, encouragement of increased energy output, with less emphasis upon decreased food intake.

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Watch your pup

A diabetic patient who recently came on a routine visit was much more anxious to relate the history of two dogs belonging to a friend than to discuss her own state of health. Both dogs lived in the same household—one was an elderly spaniel, and the other a young terrier. Almost simultaneously they were noted to be losing weight and drinking excessively, and though previously well trained, they began to leave puddles on the floor. The owner was surprised to find that when water was withheld they became wildly excited and continued to pass urine in large amounts. When my patient was consulted she expressed the conviction that if the dogs were human beings they would be diabetic and set about testing the respective puddles with her own Clinitest outfit. This investigation confirmed that both dogs had glycosuria, and the veterinary confirmed that both were diabetic.

The elderly spaniel was put to sleep, but the

young terrier was treated with insulin. It responded well, lost symptoms, and gained weight until one morning it passed its master in the hall of the house, and although usually obedient, walked out the front door and ignored persistent calls to return and disappeared from sight, never to be seen alive again. Next day it was found dead in the river.

My patient had explained to the bereaved owner that the dog must have been suffering from hypoglycemia and assures me that this extraordinary story of diabetes that developed simultaneously in two unrelated dogs in the same household is being recorded in the annals of veterinary science as never having been previously described. Full marks must go to my patient for her clinical acumen, and it seems that the veterinary surgeons have lost no time in seizing the material for an article that, even by Dr. Asher's standards, could hardly be turned into dull reading. *John Lister, M.D. By the London Post. New England J. Med. Oct. 30, 1958.*

Experience in the Peoria Work Classification Unit

HENRY M. WILSON, M.D. AND JAMES A. WALSH, M.D., PEORIA

IN harmony with the acceptance of the philosophy that the end point of a medical regimen should not be merely survival but restoration to the utmost physical, mental, emotional, social, and economic usefulness, the American Heart Association and its affiliates have encouraged the establishment of Work Classification Units for individuals with cardiovascular disease. Modeled after the first such facility organized at Bellevue Hospital in New York in 1941, nearly 50 such units have been founded throughout the United States.

Believing a modest program to be better than none, the Greater Peoria and Illinois Heart Associations sponsored a Unit in Peoria, which began its operation in the fall of 1955. Any individual either suspected of or actually having a cardiovascular disorder and a problem with present or future employment was accepted for study. As a concession to the physician in private practice, the Unit accepted only those eligible for services from the Division of Vocational Rehabilitation and all referrals have been from that agency even though this policy seriously limited the number who could be given assistance. In addition, prior to acceptance, all case histories were reviewed by the Unit staff so that if it could be foreseen that little or no benefit might be gained in any case, neither time nor funds would be wasted. Thus far, preliminary screening has been so well done that only one individual has been rejected for study by the Unit staff.

The staff of the Work Classification Unit consists of a medical director, who is a cardiologist, an associate cardiologist, a medical social worker, and a vocational counselor. A specialist in physical medicine is available when required. The Unit is located in a Rehabilitation Center attached to a general hospital and the facilities

of both are used for laboratory, X-ray, and other studies. A client is first seen by a clerk who records personal data and requisitions the routine tests. The medical social worker, who in the Peoria Unit has had psychiatric training, then interviews the individual and relatives when present. The social study reveals what kind of person has the disorder, his thoughts, feelings, fears, ambition, drives, the situation and attitude of the family, relation to society as a whole, past achievements, and in summary presents a psychological diagnosis and prognosis. The vocational counselor explores the complete work history of the patient. Working conditions with respect to environmental and transportation problems are investigated. An effort is made to estimate special skills, work attitudes and motivation, physical effort required, and ability to assume responsibility. Aptitude is determined by testing when necessary. Based on the above studies and the educational background of the individual, the counselor reports to the panel on the occupational potential of the patient and makes recommendations as to the most preferable employment to be considered, and also several alternative choices. He also gives advice as to pursuits to be considered if re-training is elected. The physicians conduct a comprehensive medical study, consisting of a thorough medical history, complete physical examination, and review of laboratory, X-ray, and electrocardiographic data. No elaborate functional capacity tests are made other than an occasional Master Two-Step test and demonstration of physical capacity in the Rehabilitation Unit. The medical examiners rely chiefly upon the painstaking history for their estimation of functional capacity. An agreed diagnosis is made, including functional and therapeutic classifications according to standards accepted by the American Heart Association. The entire panel then holds a con-

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ference and arrives at a prescription for the total care of the client. Finally, the individual meets with the Unit staff and the entire plan is explained in simple terms. Questions of the patient and family are answered. A comprehensive report is sent to the personal physician and Rehabilitation counselor with unequivocal recommendations for physical and vocational rehabilitation, employment, and medical care. However, no comment on medical management is made to the client; treatment is left to the direct responsibility of the personal physician. While the main objective of the Unit is service to the patient, the private physician benefits by the medical education, clinical research, and consultation to and sharing of responsibility.

Thus far, 41 patients from all areas of downstate Illinois have been studied in the Peoria Work Classification Unit. Thirty-seven were males. The age distribution was from 20 to 62 years; 11 in the third decade, eight in the fourth, 10 in the fifth, 10 in the sixth, and two in the seventh. Twenty-eight were unemployed at the time of examination in the Unit, though several believed they could perform some useful work but had been dissuaded by their physicians. Multiple diagnoses had been and were made in some cases such as combined arteriosclerotic and hypertensive cardiovascular disease with or without angina pectoris. The most frequent diagnosis on referral was arteriosclerotic heart disease. The most accurate referral diagnoses were made in those with valvular disease due to rheumatic fever, although exact anatomical diagnoses were sometimes not offered or were in error. Not one patient was on medication to prevent recurrence of rheumatic infection or had been warned of the possibility of bacterial endocarditis and advised as to its prophylaxis. Of those thought to have no heart disease by the Unit, referral diagnoses were: one undiagnosed manifestation; one rheumatic heart disease; and six arteriosclerotic heart disease, three of whom were said to have angina pectoris. None of the 28 unemployed was found totally incapacitated; some had been advised to work but to "take it easy" and had been unable to find employment compatible with their interpretations of such an admonition. Recommendations of the Unit were that six should not seek work until noncardiac or cardiac disabilities had further evaluation, and four were thought to be candidates for cardiac surgery. Nineteen

were advised to continue their same occupations. Sixteen were told that a modification of their work was required and specific recommendations were made. Eleven were found in need of definitive therapy for cardiac or general medical disorders including physical therapy. Seven patients were found to have emotional disorders that were the major deterrent to employment, and one of these was believed to be a malingerer.

Follow-up study has been made by communication with the Rehabilitation counselor, personal physician, or the client. All who were employed at the time of examination continued to work. Of the 28 unemployed, eight resumed their regular occupation, seven entered a different occupation as prescribed, two are in active vocational re-training, one is in active physical rehabilitation, four remain unemployed because of noncardiac medical or emotional disorders, three are unemployed because of unavailability of work, and three could not be traced.

A few brief case reports may be cited:

(1) A 52 year old farm hand had been unemployed for six years and was supported by public funds. Referral diagnosis was hypertensive cardiovascular disease and arteriosclerotic heart disease with angina pectoris and a hopeless prognosis for return to work. The final diagnosis was uncomplicated benign hypertension and obesity. He was advised to resume work, reduce weight, and continue treatment for hypertension. He returned to work and voluntarily asked to be removed from relief rolls.

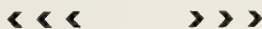
(2) A 26 year old clerk typist was unemployed for five years following a left hemiplegia due to cerebral embolus in the course of a subacute bacterial endocarditis engrafted upon rheumatic valvular disease. She remained home in despair until she visited an ophthalmologist who referred her to the Unit. She entered an intensive physical rehabilitation program, and is now taking a refresher course in business college prior to return to gainful employment.

(3) A 62 year old chauffeur for a mortuary suffered a myocardial infarction. Despite an uncomplicated recovery and no sequellae, he remained unemployed for eight months. Examination at the Unit determined he was qualified to resume his former occupation, and direct communication with his former employer led to his return to work five days later.

Experience at the Peoria Work Classification

Unit is in accord with that in similar facilities throughout the nation. Although our sample is small it demonstrates that a multidisciplinary team approach is an effective method of rehabilitation for patients with cardiovascular problems. The effectiveness is not wholly determined in the Unit itself, but by a vigorous acceptance of the recommendations by the Rehabilitation counselor and the personal physician. Nearly 20 per cent of those referred to the Unit had no heart disease. The erroneous diagnosis of angina pectoris indicates that chest pain is too readily accepted as cardiac in origin and suggests that more careful medical histories are needed. The failure of the profession to put into effect the preventive measures for rheumatic fever and bacterial endocarditis, despite their widespread publication

and direct mail distribution by the Heart Association, creates a challenge as to how best to disseminate new knowledge in medicine. The fact that more than half of the Unit clients were unemployed indicates that we are still too conservative in our estimation of the ability of the cardiac to work, too overprotective of the patient, and too apprehensive as to the prognosis in heart disease. Finally, it seems that the medical profession should be informed of resources readily available to the handicapped, either in their own community or within a reasonable distance. It is still the obligation of every physician to assist his patient to enjoy as abundant a life as his incapacity will permit, and rekindle the spark of personal dignity that exists in the heart of every man.



Uncovering the alcoholic

The facial appearance is the first area affected overtly by alcoholism. The capillaries around the conjunctiva of the eye become engorged. However, the physician may not associate this condition with alcoholism, since in most instances an alcoholic who goes to a physician for treatment of illness will take care not to appear under the influence of alcohol. More commonly, a puffy, edematous appearance is noted in the skin and subcutaneous tissue of the face and forehead; and, as alcoholism continues and there are repeated episodes of drinking, this facial edema eventually leads to the development of deep grooving at the corners of the eyes as well as throughout the skin of the forehead, face, and cheeks. In persons with fair complexion, flushing of the skin is common, with pronounced hyperemia which after a long period develops into "whisky nose." Edema also may be observed

in the nasal mucous membrane, the posterior pharynx, and extending into the larynx and the vocal cords — the latter causing the hoarseness so prevalent in overt alcoholism.

Alcoholic tremor is one of the most common of physical changes associated with prolonged excessive drinking; and the tremor may persist long after the patient has ceased to drink. It is aggravated when the patient attempts to stop drinking and is relieved temporarily by further ingestion of alcohol. Perhaps the most common form of pathologic change in the stomach is alcoholic gastritis, manifested by loss of appetite, frequent periods of nausea, and occasional vomiting following a drinking episode. Blood in the vomitus, gross or occult, often is found. Evidence of irritation of the lower intestinal tract may be noted — either obstipation or severe diarrhea. *P. O'Hollaren, M.D. and W. M. Wellman, Ph.D. "Hidden" Alcoholics. California Med. Aug. 1958.*

Clinical-Surgical Conferences



Neglected Appendicitis

*Department of Surgery
Cook County Hospital*

Moderator:

ROBERT J. FREEARK, M.D.
Director, Surgical Education
Cook County Hospital

Discussants:

EDWIN MILLER, M.D., Emeritus Professor of Surgery, University of Illinois
KARL A. MEYER, M.D. Emeritus Professor of Surgery, Northwestern, University Medical School and Chairman, Department of Surgery, Cook County Hospital

Dr. Robert J. Freeark: Our conference today deals with a subject that continues to plague the house staff of Cook County Hospital, despite great strides in medical knowledge and experience. When appendicitis progresses into the third and fourth day of illness, someone has been remiss. Here at County most often it is the patient or his family who fails to seek medical aid until the disease reaches an advanced stage. Regardless of where the diagnostic error lay, the therapeutic challenge is a real one and the acquisition of sound judgment in the management of such cases is a goal not easily attained. We have with us today two surgeons with a combined experience that approaches 100 years in this problem of neglected appendicitis.

Dr. Edwin Miller was for many years an attending man at Cook County Hospital on the pediatric surgical service and has made extensive

contributions to the training of the house staff here and the medical profession in general. At present he is emeritus professor of surgery of the University of Illinois College of Medicine. Dr. Karl A. Meyer needs no introduction to you. His lifetime contributions to this hospital and to the entire field of medicine and surgery are well known to all. Perhaps less well known is the fact that Dr. Meyer for many years handled exclusively the night surgical emergencies at County. This large operative load currently is divided among several senior residents. During his years of service on night surgery, Dr. Meyer found the problem of the neglected appendix a not infrequent one. Treatment at that time lacked the benefits of antibiotics and other supportive measures. I am sure that the remarks from these two great surgeons will contribute much to our understanding of this problem.

Case 1.

Dr. John Raffensperger (Surgical Resident): I did not take care of this patient but he had an extremely fine hospital record.

This 4 year old white male was admitted to Contagious Hospital on June 14, 1956, with a five day history of anorexia, fever, dry cough, and upper abdominal pain. His temperature at home ranged from 101° to 103° F., axillary. Two days prior to admission the child had localized pain in the right lower quadrant; he began vomiting and passed eight to 10 watery

stools. The family pediatrician had examined the child and felt that his complaints represented the prodromal stage of measles. On the morning of admission the exanthem of measles was noted.

Examination revealed a well nourished, acutely ill child with a rectal temperature of 103° F., pulse 120, respirations 29. The eruption of measles was present on the face, and Koplik's spots, coryza, lacrimation, and photophobia were apparent. The abdomen was flat with direct tenderness in both lower quadrants but more pronounced on the right. Localized resistance suggestive of a mass was noted in the right lower quadrant. Rebound tenderness was absent. Bowel sounds were normal. Rectal examination shed tenderness on the right side. Laboratory study disclosed a normal urine, 97 per cent hemoglobin, and a white blood cell count of 19,000.

The child was placed in Fowler's position. He was seen almost immediately by a surgical consultant who confirmed the above findings.

The impression was that the patient had an appendiceal abscess, with dehydration and measles. Treatment consisted of nasogastric suction, Achromycin®, and intravenous fluids. For the next two days the child was extremely ill with temperatures ranging between 102° and 104° F. The mass persisted, his pulse reached 144, but bowel sounds were present. On the second hospital day after the decision for nonoperative treatment, fine rales were heard in the right lower and middle lobes and a clinical diagnosis of bronchopneumonia was made. For the next four or five days he was kept on Levine suction, and carefully maintained on intravenous fluids and electrolytes. By the sixth day gradual improvement was apparent and the Levine tube was discontinued, the pulse became slower, and the temperature dropped to 100° F. On the seventh day the boy was taking fluids orally. One week later he was afebrile and the mass was smaller. On the day of discharge, 16 days after admission, the mass was the size of an egg and no longer tender. The lungs, on fluoroscopic examination, were clear and he was discharged to his home with recommendations for restricted activity.

Dr. Freeark: I had the experience of taking care of this boy. His course was extremely stormy. We could not tell whether we were gaining or losing on the appendiceal process and its localization because in measles the temperature

is always subject to wide variations. The development of bronchopneumonia shortly after admission seemed to commend the decision against operative intervention but his grave condition raised considerable question about this.

The boy lost 12 pounds during his hospital stay but is well at present.

Dr. Edwin Miller: With modern developments in medicine and surgery, improved hospital conditions, qualified surgeons and facilities almost everywhere, and with means of getting patients to hospitals in a hurry, it is hard to understand why any patient these days should die as the result of appendicitis. But some still do. One of the reasons is that appendicitis either is not diagnosed early enough or is neglected, in one way or another, after diagnosis because of uncertainty as to the course of procedure that should be instituted. Some patients will not get to the doctor quickly enough because many of them are poor, one might even say ignorant, and will not seek medical aid soon enough.

However, the important thing to remember is that not all cases of acute appendicitis follow the textbook picture and the most intelligent patient or physician may not recognize this condition. Many are atypical in one way or another. For that reason diagnosis is not made or it is deferred too long. The appendix may not lie in the right lower quadrant of the abdomen; it sometimes is up near the gall bladder or down in the pelvis. Occasionally it is on the left side. As a result, symptoms often are far from what we would expect in the typical case.

We are inclined to think that appendicitis in the young infant is extremely rare and that we don't need to consider it seriously. Let me say that as long as the appendix is lined by mucosa there can be acute appendicitis in any patient, no matter what his age. The youngest infant I have operated upon was two weeks old. The diagnosis was not clear as the baby presented evidence of strangulated right inguinal hernia. The inguinal canal was opened, the sac was found full of pus and in it was a gangrenous ruptured appendix. The outcome in this case was good following removal of the appendix and the establishment of adequate incisional drainage.

At the other end of the ladder, we may be inclined to believe that appendicitis is not common in old people. Yet we often see it. You may

have a false sense of security in not considering appendicitis as seriously in the aged as in younger folk. I remember an atypical case of a man of 69 whom I saw in his home before bringing him to the hospital. He was an English butler in a wealthy family, and when I saw him first he was in the kitchen washing dishes. I examined him; he had acute tenderness and a mass in the right groin which clearly seemed to be an incarcerated right inguinal hernia. We opened up the inguinal canal, found strangulated omentum surrounded by a good deal of pus which was coming down through the internal ring from the diseased appendix. I removed the omentum and a gangrenous ruptured appendix.

I have described to you examples of acute appendicitis in the young and old that presented atypical clinical pictures. What other ways does appendicitis manifest itself? We had a young man of 27 with what appeared to be a classical acute appendicitis. Instead it was an acute Meckel's diverticulitis. The differential diagnosis between acute diverticulitis and appendicitis is, as you all know, extremely difficult to make and serves to emphasize the need for further exploration when the appendix is normal.

The complications resulting from gangrenous appendicitis may be serious. Aside from an acute spreading peritonitis which becomes generalized and all too often fatal—at least, it was in the preantibiotic days—there are other complications. One is intestinal obstruction. This occurred in one of our patients, a child who had a ruptured appendix with an adherent loop of ileum attached to it. On this had developed a mechanical type of acute intestinal obstruction. We tapped the ileum above the obstruction, then turned the child over on a frame so that the fecal material could pass out. This would allow the irritated skin to clear up so that we could go in on the left side and close the intentionally created external fistula easily.

Another complication that we fear is subphrenic abscess, on the right side or even on the left side in cases where the appendix may be abnormally situated. I have seen one on the left side in a child 7 years old. The lesion was typical in all respects, with gas and fluid levels under the left diaphragm. The abscess was well forward. Drainage was established extraperitoneally through a left subcostal incision, and the final result was exceedingly good.

Since the complications of appendicitis are numerous and can be exceedingly serious, we should make every effort to treat these patients adequately and as early as possible. My ideas about the situation that developed in the case just presented by Dr. Raffensperger are these: Clinically I class cases of appendicitis in three groups: (1) Those which, by their history and physical examination, are obviously acute appendicitis in the early stages. There is no dispute or difference of opinion on how those cases should be handled. (2) Cases that have a longer history and who come to us at a time when there has been a perforation but it has been met with good defense mechanism and there is a palpable mass. This represents a wall of defense around the perforation and makes the situation anything but an emergency. After study of a large number of such cases we have come to the conclusion that the majority with a palpable inflammatory mass should be handled conservatively at least, for a time. If left alone and watched carefully day by day, most cases will show gradual improvement in the general clinical picture with subsidence of fever and white blood cell count. Gradually this palpable mass will become smaller and smaller and, after a period of days or weeks, will disappear. That is the usual course, but don't misunderstand me. Such an appendiceal mass is not always present in the right lower quadrant; it is where the pathology is and that may be almost anywhere in the abdomen. It may be high up or low down, and it may even be detected only with a finger in the rectum. The mass may be small or large. Some represent a forme fruste type of perforation against which the surrounding bowel and omentum are firmly adherent, and there is little if any real abscess present. Many cases are just the opposite with definite abscess formation and on X-ray examination may show gas or fluid levels. The mass enlarges as the days go by; it does not improve or get smaller. Drainage is demanded. This type was present in a small percentage of our cases. These patients can be treated safely through an extraperitoneal approach as lateral as possible without the likelihood of a spreading peritonitis. The appendix can be removed later on when the patient is perfectly well. (3) Patients with perforation against which there is no defense. Clinically there is a spreading peritonitis. There is a

difference of opinion on how to treat these patients. My belief has been that the primary thing is to operate upon them and remove the source of infection—in other words, remove the appendix and shut off the faucet. Treat the patient supportively by means of chemotherapy and antibiotics. Not all surgeons agree, but that has been my view over the years and I have yet to regret following that policy. Dr. Meyer has had more experience than any of us and I believe holds a similar view.

As for the patient with measles and obviously beginning pneumonia, presented today I think he was handled very intelligently. He obviously was a sick child who had originally a questionable palpable mass in the right lower quadrant. In a patient this age, the lesion could hardly be anything but an appendiceal mass. Therefore, I think the conservative policy adopted was extremely wise. If this patient had shown evidence of a perforated appendix without any findings of a defense mechanism such as the palpable mass, then the problem would have been considerably different and he should have been operated upon, regardless of measles and beginning pneumonia. The appendix in such a case can be removed under local anesthesia without much danger so far as the respiratory problem is concerned. I think congratulations are in order on the way this patient was managed.

Dr. Karl A. Meyer: Dr. Miller will no doubt recall the many meetings of various surgical societies throughout the years and specifically the Western Surgical Society when the subject of appendicitis came up. Usually an animated discussion ensued regarding the correct treatment of this dread condition. I agree with him that the conservative treatment carried out in this patient was ideal. I believe it saved the patient's life.

Dr. Freeark: Dr. Miller, if we had felt that drainage of this appendiceal abscess was necessary because of continued sepsis, should we have at that time removed the appendix too or merely incised the abscess?

Dr. Miller: Sometimes when you open into an appendiceal abscess, you find that the appendix has sloughed off and is lying there free and often you can just pick it out of the abscess cavity, or you can pick out a fecal stone. Not in every case of this kind should an attempt be made to remove the appendix because of this

one thing: the pathology in the appendix does not always involve the entire appendix. Suppose we had a distally obstructed appendix with a stone; our pathology would be distal to that and the remainder of the appendix relatively normal. If this appendix perforates, we build up an appendiceal abscess and we open into this and drain. We may remove a stone or the free lying distal part of the appendix, but the rest of the organ is outside the zone of defense and to attempt to remove it is, in my opinion, poor surgical judgment.

Dr. Freeark: Dr. Meyer, we thought that the elevated white blood cell count in this child with measles was a valuable indication that abdominal pain was not related to the measles but to appendicitis. Would you have a comment to make about the value of a white count in general and in this case in particular?

Dr. Meyer: It was valuable here because it showed you were dealing with a septic process. We see epidemics of appendicitis following colds or upper respiratory infections frequently, without any leucocytosis. To insist upon an elevated white count before operating for acute appendicitis is to invite disaster. The count was valuable in this case, however, because leucocytosis usually is absent in measles and confirmed the presence of a septic process.

Case 2.

Dr. Carl Lum (surgical resident): This 7 year old, colored male was admitted to Cook County Hospital on October 7, 1958, with a three day history of abdominal pain and vomiting. Pain had started in the mid-epigastrium and shifted to the right lower quadrant on the day of admission.

Physical examination revealed localized tenderness in the right lower quadrant and no rebound tenderness or rigidity. On rectal examination there was tenderness on the right side but no mass. Bowel sounds were normal. His temperature was 100.6° F. rectally. The laboratory reported a negative urine, white blood count of 16,650, and hematocrit of 40 per cent.

The patient had had no bowel movement for 48 hours. He was taken to surgery and under general anesthesia, with the abdomen well relaxed, a clearly defined mass was palpable in the right lower quadrant. The question arose, should we proceed with surgery or discontinue the an-

esthetic and treat the patient conservatively?

Dr. Freeark: This is a problem I would not like to face in the management of a private patient, and it was difficult in this case. The family had been notified that the child had appendicitis and they knew the treatment of choice was appendectomy. The operating room was alerted, anesthesia was induced, and on relaxing the muscle spasm in the abdomen, this well defined mass was found. Dr. Meyer, how would you handle this problem?

Dr. Meyer: The question of appendicitis still is a relatively serious one. Neglect in diagnosis may lead to increased mortality and morbidity. Many errors are made by the internist in procrastinating. For this reason primarily, I think straight internships—for example, in medicine or in surgery—are weak because so many patients seen early by an internist or a young physician who has not had experience in surgical management of the acute belly does not do the patient too much good. We see so many neglected cases that often demand judgment of great acuity to bring them through alive. I believe that every intern and every internist should have a thorough basic training in what an acute abdomen means. You will have a low mortality rate if you operate early when a patient has pain, vomiting, and abdominal spasm. Dr. Kanavel always said that when you have pain, vomiting, and abdominal spasm you have a surgical belly and you have to make a differential diagnosis. It means the patient should be operated upon; you should not wait for a period of neglect to try to bring him through. This holds not alone for appendicitis but for intestinal obstruction, perforated ulcer, and acute gangrenous gall bladder. The problem of early operation in appendicitis was acute when Dr. Miller and I were young in practice. Dr. Murphy and Dr. Ochsner were then giving the talks so illuminating to most of us on early diagnosis and surgical management. In those days we did not have good anesthetics, intravenous fluids, or antibiotics.

In handling this patient I would hope that surgery was cancelled. In other words, when he was put to sleep and they had a chance to overcome spasm and palpate gently, they found a mass. They could have disturbed that patient by surgery. Here they had a child who was not too sick; they could have converted a localized

peritonitis into a generalized peritonitis with possible mortality or a prolonged hospital convalescence. It has taken a long time to acquaint the referring physician with the fact that patients like this should not be operated upon. That does not mean that all these patients are going to get well without surgery. Perhaps about 90 per cent of them will get well under conservative therapy, and a certain number will form frank abscesses. The trick in a frank abscess is to drain extraperitoneally and to do so after you have waited for a period of days so that the mass will localize and the patient is holding his own. Then you can drain it without difficulty. The danger is not that you cannot find the abscess but that you might perforate the bowel in approaching it and produce a fistula. These lesions are complicated and result in mortality or long convalescence.

When the abscess drains into the pelvis you have an early diarrhea, and when you have a septic belly and diarrhea, you must keep in mind that a pelvic abscess is developing. By rectal examination you will note thickening of the mucosa. Some will clear up but others will not, and when there is continuous diarrhea with frank abscess palpable, you can drain the patient through the rectum without any mortality. The bladder should be emptied beforehand to be sure that you are in the proper location and do not injure the bladder. This method of drainage is imperative. I have seen surgeons try to drain a pelvic abscess through an abdominal incision and whenever you drain an abscess into the peritoneal cavity you are in trouble. Wait until the abscess is well localized so that you can drain it without emptying the abscess into the free peritoneal cavity.

I referred earlier to the Murphy and Ochsner treatment of appendicitis. It differed only in the duration of the disease. When they had a case, within the first 48 hours of onset, there was no debate between Murphy and Ochsner whether it was surgical or medical. Early operation meant a low mortality then as it does now, and whether the condition is due to appendicitis, intestinal obstruction, or any intra-abdominal lesion, it demands surgery. The earlier the operation the less the mortality, and both those great surgeons knew this. The Ochsner treatment differed from the Murphy treatment in that when the condi-

tion had reached the third or fourth day with abdominal distention and loss of peritoneal reaction, Ochsner would place the patient on conservative treatment in Fowler's position, giving him fluids and using morphine because he believed it stimulated peristalsis. He then observed the patient under this form of management. On the other hand, Murphy would operate upon many of these patients and he had the higher mortality rate.

I would agree with Dr. Miller that on the third day, if you have early peritonitis, you will realize that the spill is in the free peritoneal cavity; unless you operate, you will have multiple abscesses or high mortality. Consequently, I would certainly agree that on the third day or even the second day you can have an acute perforated appendix with fecalith close to the cecum, rupture into that location, and spill into the free peritoneal cavity. The peritoneum will not take care of cases like that and surgery should be done. You go in as gently as you can, so as not to disturb the surrounding defensive mechanism and break down the barrier and remove the appendix. If a nosey surgeon breaks down those barriers he is in trouble. I have seen men do an appendectomy and then reach into the abdomen to find out if anything else is occurring. I would have no confidence in a man who would do that. When you find the pathology, take care of it and then get out and don't explore and spread the infection. The same is true in other surgical conditions. When I find the head of the pancreas indurated during cholecystectomy for example, I would not think of exploring that pancreas further and stirring things up. The trauma that has been done in needless exploration during acute abdominal operations has produced many serious complications.

Do we drain the belly or do we not? That is the problem in peritonitis. Some time ago I went over with one of my interns a series of 2,500 cases we had treated here for peritonitis. Treating them conservatively without intraperitoneal drainage lessened mortality and morbidity perceptibly. I insist upon, and try to teach my men to drain down to the peritoneum in an effort to prevent abdominal wall infection because that is one of the most frequent complications following surgery. Those infections can become acute; they can develop between the muscles,

under the fascia, and just above the peritoneum, and can develop into such a large abscess that you think the patient died of coronary thrombosis when rupture occurs. When you have temperature and leucocytosis following surgery for acute appendicitis, you should suspect infection of the abdominal wall and this should be carefully handled. Don't remove all the stitches at once. Remove one or two stitches, establish drainage, put on hot wet packs, and treat the patient conservatively. If during appendectomy you spill pus into the abdominal wound, close the peritoneum tightly, put a drain down to the peritoneum, and institute treatment with hot applications. In that way you will obviate many of the abdominal wall complications.

Dr. Freeark: Dr. Meyer correctly anticipated the management of this case. The child was awakened. He was not operated upon, but was returned to the ward where he made an uneventful recovery and was discharged from the hospital on the seventh hospital day. He will soon be called back for elective appendectomy. You have spoken of abscess in the abdominal wall with rupture into the peritoneal cavity. Have you ever observed a patient with appendiceal mass that ruptured spontaneously and caused generalized peritonitis?

Dr. Meyer: That can occur, which is why you must observe them carefully. When you have a well walled off abscess, then consider drainage. It can rupture into the peritoneal cavity spontaneously with disastrous consequences.

Dr. Irving Stein, Jr. (Associate Professor of Surgery, Northwestern University Medical School): We have had a beautiful presentation of many years of experience, but I do feel that there is another aspect to this problem that you should know about. That is, surgery is indicated in some of these patients with advanced localized disease. Don't misunderstand me. I am not disagreeing with what has been said, but there are more and more reports coming out in the literature recommending surgery, particularly in early cases of abscess. Some surgeons say they operate whenever appendicitis is diagnosed. I think these are things the younger men must know to be able to weigh what you have heard today against what you will hear more and more in the future. I personally feel that if there are masses that you can feel that may not have progressed to

abscess formation you may operate and find the disease walled off but there is no free pus. It is still a phlegmon. It is still in a stage where it can technically be easily removed. The omentum has come down and covered the appendix and this can be pushed away and appendectomy done without massive spillage or without harming the patient. Particularly in the thin individual that omental phlegmon can be felt as a mass, and the patient who does not yet have an abscess will benefit from early surgery. In the patient presented with a three day history I might have been inclined to operate rather than bring the patient back to the ward. We know he will do well if we bring him back and treat him conservatively, as the results in this case certainly confirm, but there are disadvantages to conservative therapy. There may be repeat abscess formation before we can perform interval appendectomy. If the condition is still in the early stage and you do not break down a wall, I would feel that early surgery is still the answer. I think you younger men should know that people are operating at any stage of appendicitis and reporting good results. You have to make up your own minds about this problem.

Dr. Joseph Greengard: (Director Pediatric Education, Cook County Hospital): I don't think there is a physician who has had years of experience who has not had a case of neglected appendicitis on his hands. For the pediatrician this usually is because he does not see the patient early for a variety of reasons. Sometimes the parents do not call him; sometimes he has too much to do and, listening to the story over the phone, he makes an honest mistake. I would strongly urge you to see as many of your patients as you can; don't get into the habit of giving advice over the telephone. Also, if you get to the point where you are too busy, get some help. I would rather err on the side of having the surgeon take out an appendix that does not look too bad than wait until the next day and have the appendix perforate.

Dr. Freeark: Would you agree that the appendix should be removed following all cases of appendiceal abscess?

Dr. Meyer: Yes, at a later date, but be sure to wait a sufficient length of time before doing definitive surgery. Let the patient get over the

infection or you will get into difficulty with many adhesions and risk fistula formation.

Dr. Miller: I would agree.

Dr. Freeark: Do you make a distinction between the problem in children and in adults?

Dr. Miller: Yes, in a way. You know in the young child or baby that the omentum sometimes does not come well over the abdominal viscera. Therefore, an acutely inflamed appendix is not immediately surrounded by the omentum as it is in the older patient. Therefore, we often have a rapidly spreading peritonitis.

In regard to Dr. Stein's remarks, we often find a palpable mass in a case of short duration. As he said, that does not always represent a perforated appendix, because if that appendix happens to lie well forward near the anterior peritoneum, the mass can be due to a thickened omentum that has plastered itself around the early acutely inflamed appendix. One would make a mistake in delaying surgery in that type of patient.

There is one other point I want to make. Not every case that clinically seems to be a walled off abscess is that type of pathology. My last case represents a little boy who was probably the sickest patient I ever took care of in this hospital. The clinical impression was appendiceal abscess, secondary to which he developed acute intestinal obstruction and peritonitis. He was ballooned up like a base drum. There was extreme tenderness on the right side and we could make out a palpable mass. We did not do immediate surgery in this case. When we ultimately opened his abdomen, pus just rolled out. He had an acute intestinal obstruction and his primary pathology was a ruptured gangrenous intussusception. In the face of his peritonitis and his obstruction we had to resect the right half of his colon. Fortunately that boy made a good recovery.

Question: Dr. Meyer, If you had a patient with a mass that ruptured and produced peritonitis, would you feel that simple drainage of the abscess was sufficient or should appendectomy be done?

Dr. Meyer: I would leave the appendix alone and institute suction drainage of the abscess cavity.

Question: If you have made a McBurney incision for appendectomy and the appendix is

normal and no other pathology is found, would you remove the appendix?

Dr. Meyer: I certainly would — the pathologist may be a friend of yours.

Dr. Freeark: What about the case of pelvic inflammatory disease or perforated peptic ulcer in which you have erroneously made a McBurney incision and find the appendix normal?

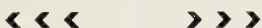
Dr. Meyer: In pelvic inflammatory disease, it would depend upon the local findings. I have lived through the days of pus tubes and I realize that when the temperature is not greatly elevated and you find large tubo-ovarian masses, these may be removed and the patient will run an uneventful course. In chronic pelvic inflammatory disease the contents of these masses often are sterile and you can do a great deal of surgery, including appendectomy, and spill the contents of the tubes all over the pelvis and the patient will get along without difficulty. In acute PID, I would not remove the appendix.

Dr. Miller: The question sometimes comes up whether the appendix should be removed if it lies in a hernial sac at the time of herniotomy. If I thought my aseptic technique was good enough and that I could bank on it, then I would say it is relatively safe to remove that appendix while you are repairing the hernia, but otherwise I would say no; push it back in and get it later.

Dr. R. C. Giles: Is there such a thing as hematogenous appendicitis?

Dr. Meyer: I think you can have a hematogenous peritonitis but I don't think the appendix alone is involved.

Dr. John B. O'Donoghue (Attending Staff Cook County Hospital): I think the wisdom and philosophy of treating one of the most serious problems in the abdomen have been presented today in an unusual and interesting manner. We who have passed through a lifetime of experience can appreciate the wisdom of the remarks of these two men. We have all profited by the discussion.



Medicine in the gay 90's

Lately I've been reading "The Household Guide or Domestic Cyclopedia, Home Remedies For Man and Beast" by Prof. B. G. Jefferies, M.D., Ph. D., Chicago, and J. L. Nichols, A.M., published in Naperville, Illinois, in 1894. A surprisingly large part of this practical guide has stood the test of time. But there are anachronisms and some of the remedies can no longer be considered medically sound. For example, the treatment of sunstroke: "Remove the patient in the shade and apply cold water to his head and neck, and a mustard plaster to the feet." Some are almost offensive: "Pork and Onion Poultice, Good For Wounds Made By Rusty Tools or Nails, Bruises, and Lacerated Wounds." Or, if you don't like onions "When

anyone is injured by running a nail or wire into the flesh, hold the wound over burning sugar as soon as possible and it will prevent the poisonous effects, and little if any soreness will result."

Several of the remedies are much less complicated. "A Very Simple Cure for Round Shoulders" goes like this: "Round shoulders are almost unavoidably accompanied by weak lungs, but may be cured by the simple and easily performed exercise of raising one's self upon the toes, leisurely, in a perpendicular position, several times daily." And on "Sleeplessness," point number three is worth ruminating: "Lie with the head to the north, for there is something in the electrical effects of the earth upon the body when in that position." *Waldo P. Tuthill, M.D. Tuthill Says . . St. Clair County Med. Bull. Nov. 1958.*

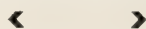
Research by practicing physicians

One kind of research that is being done with increasing frequency by practicing physicians is the testing of new medicines that are about to be marketed by the large drug companies. After the manufacturer has made exhaustive preliminary studies and tests, the medicine in question may be given to carefully selected patients under close supervision and control. If the new drug proves to be of value, several experts in the field continue with the investigation. Finally, if it has proved to be of value for certain diseases and not to have serious side effects, practicing physicians are selected to do the final evaluation, the drug company supplying the drug, literature, and record-keeping forms. Similar studies can be done on drugs that have been in use for a long time if the researcher has reason to believe that they might be useful in another illness than the one for which they were previously used. The drug companies are much interested in such work and will give the fullest co-operation to serious investigators.

Every physician is actually doing research work by trying various recommended medications for the same illness and finally selecting the one that seems the most effective. If exact records are kept and prove that one specific treatment is much more effective than others, it might be valuable to publish such a finding.

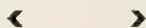
Now, a word of caution. In the field of therapeutics, ethical consideration puts restrictions on research. Our medical associations and our attorneys caution us not to use any other therapy than "one which is accepted as good practice by the physicians of the community." This sounds discouraging to a man in medical research and it must be admitted that a literal interpretation of this rule may hamper medical progress and discourage individuality and originality. We should, however, keep in mind that the reason for these rules and regulations is to protect the patient from harm and to assure a regimen that should never be inferior to one that is generally accepted. But if a physician knew of a chemical that appeared to be promising — for example, in the palliation of metastatic cancer — certainly, it could be tried after the usual methods had failed. Steps to protect the investigator legally in such an event are consultation, detailed explanation to the patient and the relatives, writ-

ten consent and, in doubtful cases, a discussion of the particular case with an attorney. Generally there will be little danger of any legal involvement if the researcher has been the family physician of the patient for many years and has his full confidence. In no circumstances, should a drug of proved value be withheld from the seriously ill in order to try an experimental medication. *K. Schnitzer, M.D. Research by Practicing Physicians. California Med. May 1958.*



Marriage and blood pressure

An investigation of the effect of family size on blood pressure produced some interesting and, at first sight, surprising results. Pregnancy may provoke the appearance of hypertension in some subjects who develop toxemia; and in some, the rise of blood pressure may persist. Accordingly, it might be expected that multiparous women might have higher pressures than nulliparous women. However, on the contrary, an inverse correlation was found with family size — the larger the family, the lower the pressure. A similar trend was reported in the women of the Bergen survey. Even more surprising was the finding in the South Wales survey that family size influenced blood pressure in a similar way in the male. The trend for systolic pressure in men aged 15-50 years is almost as marked as in young females, though it is absent in diastolic pressure measurements. Single men had higher systolic pressures than the married, and the fathers of small families higher than those of large families. *Editorial. Environment and Blood Pressure. Brit. M.J. Nov. 15, 1958.*



Pioneer work

In December, 1895, the antitoxin treatment of diphtheria was discussed. The author viewed the present antitoxin craze and felt it would follow the wake of Brown-Sequard's elixir of life and Koch's lymph. In June, 1897, Doctor Hay reviewed the antitoxin treatment of diphtheria and reported his experience with the remedy. He unqualifiedly favored its use in all cases of diphtheria. In January, 1900, Dr. W. A. Evans of Chicago stressed the infectiousness of milk from tuberculous cows. *Howard J. Lee, M.D. The Milwaukee Academy of Medicine — The Early Years. Wisconsin M. J. Oct. 1958.*

EDITORIALS



The physician in Russia

Political revolutions may alter the practice of medicine but the physician will not suffer too much if he maintains his high standards and ideals. The more communistic or tyrannical governments become, the more the oppressed people will come to rely upon the physician when they are ill. The politicians may put industrial production before health but the physician will win in the long run by remaining merciful and friendly. A good physician-patient relationship helps cushion the impact of a despotic system on the individual. In time, these governments discover that the medical profession is helping their cause by reducing discontent, tension, and disaffection.

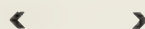
This was brought out recently in an editorial comment* on Mark G. Field's book, "Doctor and Patient in Soviet Russia." This book is not a study of Soviet medicine but of the sociology of the medical profession.

The Bolsheviks could not tolerate the exercise of power or influence by anyone other than the State. The resistance of physicians to State pressure was weakened by abolishing their professional organizations, by indoctrination of students, and by reducing the prestige and the standard of living of members of the profession. They were deprived of their corporate strength by putting them into a vast medical workers' trade union. They had no voice in the organiza-

tion because they were outnumbered by the orderlies, nurses, and other ancillary medical personnel.

But time solved the problem, especially for those who maintained "the basic ethical universalism of medicine." The tradition of personal service has survived through the years and the practice of medicine is now becoming more attractive because it offers an opportunity to help the people without being involved in politics.

Less than a quarter of the Soviet physicians are members of the Communist Party, the majority in administrative work. A split is said to exist between the administrators and the clinicians; the latter feel that the party physicians have somehow betrayed the profession by swearing allegiance to another group. The clinicians may not have a voice in government but there is considerable solidarity and co-operation among them. This is a good and useful attitude when serving mankind.



Bacteria at the bedside

The obvious is easily overlooked. Walter, et al.* inspected the bedside glass water bottles in 24 Boston Hospitals and found a high density of staphylococci as well as a higher density of coliform organisms than the USPHS standards allow for drinking water.

The investigation stemmed from patients' com-

*Editorial, *Lancet*, Sept. 20, 1958.

Walter, C. W., et al.: *Bacteriology of the Bedside Carafe*, *New England J. Med.* 259:1198, 1958.

plaints of unpalatable bedside water. Inspection of the water carafes revealed turbid, malodorous water in the majority.

There were many reasons for contamination despite the fact that fresh Boston tap water and clean ice made from it do not support bacterial growth. Lack of cleanliness of the carafes and their contents was noted frequently. The design and configuration of the containers made washing difficult; the material used in the construction of many of the carafes was of the type that could not be sanitized by heat. In a third of the hospitals investigated the carafes were cleaned and filled in utility rooms where "other utensils—basins, bedpans, and urinals—were cleaned."

The handling of ice was not satisfactory and contamination occurred from oronasal discharges, excreta, and dust from clothing and floors. In a few instances, the infection was traced to the manufacture of ice with faulty, poorly maintained machinery.

The authors found that replenishing the water and ice in a bedside container was not done hygienically. The bottles must be emptied, cleaned, and refilled from the tap every time to rid them of saliva contaminated residuals. Carafes from which patients sip water need extra care.

This study should stimulate every hospital to make a survey of the handling of bedside water. Walter recommends the following program:

"Proper installation and operation of ice-cube makers that are isolated from sources of bacteria shed by patients and personnel; automatic bagging of ice cubes and storage at a temperature less than 20°F.; dispensing of ice cubes from refrigerated dispensers with ice tongs; provision of carafes with wide mouths to facilitate cleaning, inspection, and filling; daily sanitization of carafes with heat; processing of carafes in the diet kitchen by personnel trained in food-handling precautions; and complete emptying and refilling of carafes from the tap each time they are serviced."

◀ ▶

Guard within yourself that treasure, kindness. Know how to give without hesitation, how to lose without regret, how to acquire without meanness. — George Sand

A new concept of the clinical pathological conference

As far back as Benivieni in the 16th century, physicians have gathered about the postmortem table for the purpose of determining the cause of death and of seeking all factors contributing to death. In the 18th century, during Morgagni's time, physicians concerned themselves with gross changes of tissue. By the 19th century, in Virchow's period, they added to their discussions the findings revealed by the microscope. With the advent of the 20th century, after Aschoff's influence, they talked of the role of bacteriology and toxicology. During the past quarter of a century, stimulated by H. Gideon Well's discoveries, they have emphasized the importance of biochemical changes associated with the dying process.

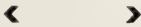
It is clear, however, that a postmortem conference is not alone a pathologic conference; nor is it alone a clinical conference, nor a biochemical, nor a bacteriologic conference. It is a conference concerned with the whole of the life of a deceased man—with the social, domestic, economic, and emotional life as much as with tissue pathology. These fields are so intimately related, one cannot be separated from the other.

The classical authors of the past, like Plato, Lucretius, and William Cullen clearly saw that a poor social environment, a bad economic situation, or an unfavorable domestic state, creates emotional instability that may be associated with or directly responsible for disease. Yet the best of our present day clinical pathologic conferences make no mention, for example, of the unhappy childhood of the alcoholic that leads to Laennec's cirrhosis. Our sessions say nothing about the old man who lives alone in a solitary hotel room with no inclination or encouragement to eat a balanced diet, the lack of which leads to malnutrition and a beriberi heart. Our meetings ignore the restless ambition of a young lawyer, anxious to obtain wealth and fame, which terminates in a myocardial infarct. Nor do we trouble ourselves in inquiring into the lives of miserable parents who constantly berate and flog a boy who later turns to narcotics, the intravenous administration of which eventually terminates in thrombophlebitis or a septic infarct of the lung. Our gatherings sink into the background the importance of a shrewish wife in the produc-

tion of her husband's duodenal ulcer, the hemorrhage from which leads to death. Our discussions pay no regard to the neurotic wife whose inattentive husband leads her to bulimia, and this to massive obesity, thus aggravating hypertension that terminates in cerebral hemorrhage.

The postmortem conference cannot achieve its purpose without the active participation of a psychiatrist, a social worker, a geneticist, a sociologist, an economist, and a public health worker, or general practitioners specially trained in these fields. With a free discussion embracing the patient's life in all its aspects, a marvelous opportunity is offered the physician to study the earliest factors involved in disease. By learning to look beyond the threshold of his office and beyond the portals of his hospital, into home, factory, office, church, and field, the physician can apply this knowledge in a most practical way to the families he serves. The clinics in comprehensive care at Northwestern University, Cornell, and Harvard certify to the soundness of this new method of teaching.

Frederick Stenn, M.D.



Nursing a community challenge

Community concern over the present shortage of professional nurses is reflected by the activities of several organizations. With the passing of our Training School at Christian Welfare Hospital it became apparent that the nurse shortage would present a major problem such as we are faced with today.

Reliable authorities on standards of hospital care maintain that professional nursing service should compose at least 70 per cent of the overall nursing care in a good hospital. Properly trained practical nurses and nurses' aids are expected to render the remainder of service.

Survey studies conducted under the auspices of the Health and Hospital Division of the East St. Louis Social Planning Council emphasized the need for consolidated community support of a program designed to develop an adequate supply of nurses.

Faced with this problem, an Advisory Committee—including members of the St. Clair County Medical Society—met with the officials of Belleville Junior College for the purpose of inaugurating nurse education in this area. After

many conferences and considerable effort, a director of nurses, Miss Clara Mae Miller, was employed and a proposed curriculum was presented to the State Department of Education and Registration for approval. All of the requirements have been fulfilled and it is gratifying to announce that the enrollment for nurse's training at the Junior College was begun last September. This is a unique pilot program of nursing education at the junior college level and is the subject of great interest by the leaders in the field of nursing education.

Students enrolled in this program will be considered as college people, a slight departure from the usual atmosphere prevailing in a school associated with a hospital. These students are assured of a complete course of study necessary to become eligible for examination for R.N., as prescribed by our State Department of Education and Registration. At the end of their third year they will have sufficient credits to enroll in any school of their choice for an additional year to become a candidate for a B.S. degree in nursing. Upon completion of the program at the Junior College and successful acquisition of their R.N. from the State of Illinois, they will be entitled to reciprocity in other states in the country.

The professional clinical work of the curriculum will be conducted in the local hospitals under the direct supervision of the instructors from the faculty of the Junior College. The hospitals, therefore, will have an unusual opportunity to participate in nursing education free of any financial obligation or responsibility. The local hospitals have endorsed this program and assured us of their co-operation. Members of the County Medical Society in the vicinity have volunteered their services as instructors for subjects in the curriculum best taught by medical men.

There is no tuition charge for students residing in the tax area supporting Junior College. For students outside this limit, there is a tuition charge comparable to other college courses.

The program has been received enthusiastically and 29 students are now enrolled in the freshman class. Our students will start work in the hospitals within 30 days from entrance into the program. The first semester they will spend 16 mornings in the hospital. The second semester this will be increased to 36 mornings. All the

rest of the time they will spend a minimum of five mornings per week in the hospital. The director of nurses is of the opinion that they actually will receive more training in the hospital than will students in the hospital schools. This comes about since every moment in the hospital is directed toward an educational or a learning experience and none in service to the hospital or in the performance of repetitions services or the standing of routine watches. Along this line, we are trying to introduce some fresh thinking into the program, which is indicated by an opportunity to do some extra work in an area of interest, the inclusion of some public health work, and the possibility of work in a rural hospital program. It is important to note that the entire program is under the complete direction and control of the college with a highly qualified professional staff.

There are in Illinois 18 public junior colleges, including six branches of the Chicago City Junior College. These are:

Belleville Junior College	Belleville
Bloom Community College	Chicago Heights
Centralia Junior College	Centralia
Chicago City Junior College	Chicago
Amundsen Branch	
Crane Branch	
Fenger Branch	
Southeast Branch	
Wilson Branch	
Wright Branch	
Danville Junior College	Danville
Elgin Community College	Elgin
Joliet Junior College	Joliet
LaSalle-Peru-Oglesby Junior College	La Salle
Lyons Township Junior College	LaGrange
Moline Community College	Moline
Morton Junior College	Cicero
Mount Vernon Junior College	Mt. Vernon
Thornton Junior College	Harvey

It is quite natural, therefore, that the citizens will look to their physicians for advice and leadership in this program. For this reason the Illinois State Medical Society may wish to exercise prestige and leadership in sponsoring a similar program for the entire state.

W. C. Scrivner, M.D.
East St. Louis

Editorials from other journals —

Insurance for the Mrs.

A pharmaceutical manufacturer recently has given a new twist to the methods of selling drugs. This latest in advertising gimmicks involves a modest insurance policy that comes "for free" to any patient who will agree to take the manufacturer's medication. The implication to the patient is that the medication is so good that she is almost sure to be protected against the eventuality specified in the policy. Indeed, what is really *insurance* may become confused in her mind with a *guarantee*.

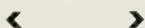
The reason for using the feminine pronouns in the preceding paragraph becomes evident from the fact that the insurance is for pregnant women against the eventuality of abortion. Specifically, the pharmaceutical manufacturer agrees to pay a sum of money to any woman who signs up for the program under the following terms of agreement: (1) She will have come under her physician's prenatal care within 60 days after conception; (2) she will have begun to use the pharmaceutical manufacturer's compound (a mixture of minerals and vitamins, as a dietary supplement) in the amounts specified by the manufacturer and not later than 60 days after conception; (3) an enrollment form will have been forwarded to the pharmaceutical manufacturer within 90 days after conception; and (4) in case she has a history of involuntary abortion, there is the further requirement that she be under the care of the physician and begin the use of the compound prior to conception. If these terms have been fulfilled, and the pregnant woman aborts, presumably she collects from the pharmaceutical manufacturer's insurer as soon as a simple claim form is filled out and sent in. She collects, that is, if the form is accompanied by enough coupons from bottles of the vitamin-mineral supplement to show that she purchased and used (?) the amount of the supplement directed by the terms of the insurance agreement.

Entirely apart from monetary considerations, it could be argued that this insurance scheme is good for people. It may induce patients to see their physicians earlier in pregnancy. Assuming that the dietary supplement in question is beneficial for pregnant women, the probability that the woman will take the medicine is enhanced. Of course, there's nothing to prevent a woman

from collecting the insurance money even if she never took a single pill.

It is evident that the pharmaceutical manufacturer doesn't sincerely believe that his product is a panacea for protection against abortion. He doesn't even bother to define abortion. There's nothing in the world to prevent a woman from collecting the insurance money although she may never have taken the medication, provided she says she took the medicine and that she sends in enough coupons.

It must be supposed that the manufacturer expects to sell so much of his product that paying claims will be a pleasure. He is pretty safe because payment is made only for involuntary abortion occurring after the first three months of pregnancy, and abortion is not too frequent in the second and third trimesters. Well, there is nothing unethical about all this, but some physicians have been repelled by what they sense to be an extraordinary kind of pressure. What do you think? *GP Nov.* 1958.



Abuse of the laboratory

Elsewhere in this issue of the Journal Drs. Diamond and Porter present persuasive data once again illustrating the principles that man is a creature of habit and that a little knowledge is a dangerous thing. What these authors have demonstrated about routine preoperative bleeding and clotting times can be extended to many aspects of clinical medicine where easily requisitioned laboratory tests have been substituted for more time consuming fundamentals of the medical history and physical examination. These tests can be particularly misleading if they are unreliable and are poorly understood by most physicians. In general, the more complicated the procedure, the more likely that physicians will be unfamiliar with the technique and unable to interpret the results. The complexity of a procedure can be awe inspiring in itself to both patient and physician, but too often such tests add only confusion and cost to medical care.

All physicians recognize the indispensable role of laboratory diagnosis in the practice of medicine, and it is those who know the laboratory best who are particularly upset when these tests are abused and misinterpreted.

Although rituals are hard to break, the opportunity of strengthening the plea that routine

determinations of preoperative bleeding and clotting times be abandoned is welcome. *New England J. Med.* Nov. 20, 1958.



Council meeting minutes

The regular December meeting of the Council was held at the Hotel Sherman, Chicago, on Sunday, December 14, with the following present: Oldfield, O'Neill, Mason, Youngberg, Camp, Clark, Kirby, Hesseltine, Portes, Piszczek, Earl H. Blair, Endres, Reisch, DuPuy, Goodyear, English, Montgomery, Fullerton, Hamilton, and Reavley. Also present were Percy E. Hopkins, Lawrence Breslow, Louis R. Limarzi, Theodore R. Van Dellen, F. Lee Stone, Walter C. Bornemeier, Richard J. Bennett, W. C. Scrivner, Mr. Walter L. Oblinger, Mr. John W. Neal, and Mr. John A. Mirt.

The minutes of the October 12 meeting were approved. Dr. Oldfield reported as President and Dr. O'Neill as President-Elect. They presented an outline of the many meetings they had attended since the last meeting of the Council.

Dr. Camp asked that a new procedure be authorized for the 1959 annual meeting of the State Society which might encourage the physicians in attendance to register at the majority of the commercial booths in the exhibit hall. MOTION made (Oldfield-Fullerton) that the committee appointed proceed with the plans for card registration at commercial booths at the 1959 annual meeting. Motion carried.

The recommendations of the Committee on Scientific Work were approved by official Council action. They included:

- (1) That the term of office for Section Officers be extended for two years to develop continuity and a long range planning schedule to improve the annual meetings.
- (2) That meetings of the House of Delegates be scheduled to avoid conflict with scientific programs where possible.
- (3) That the 1960 annual meeting be held to a three day session—Tuesday, Wednesday, and Thursday only.
- (4) That the floor plan for exhibits be revised to place all commercial booths in one room and eliminate the use of all hall space if possible.
- (5) That scientific movies again be used if and when this seems feasible.

Dr. Montgomery reported as chairman of the

Executive Committee. An opening has occurred on the Commission on Paraplegics of the State of Illinois and the name of Clinton Compere has been suggested as the representative of the State Medical Society on the Commission. Dr. Worley Kendall of Peoria is a member of the Commission at this time.

Dr. Montgomery also reported that the question of a candidate for the unexpired term of Dr. Warren W. Furey had been considered. The Executive Committee recommends that the Council approve sending a letter to all members of the House of Delegates of the AMA sponsoring the candidacy of Dr. Percy E. Hopkins for the position, the letter to be signed by the president, and secretary of the State Society, the chairman of the Illinois Delegation, and the chairman of the Council.

The question of the candidacy of Dr. George F. Lull for the office of President Elect of the American Medical Association also was discussed, and a similar letter was authorized in his behalf, stating that the Illinois delegation will support him for this office. The same four officers are to sign this letter.

MOTION made (Hamilton-Hesseltine) that a suitable resolution be prepared on the death of Dr. Warren W. Furey, to become part of the official records of the Society, and a copy sent to Mrs. Furey. Motion carried.

MEDICAL SERVICE AND PUBLIC RELATIONS

Dr. Hopkins reported as chairman of the Committee on Medical Service and Public Relations. The need for county medical societies to become more interested in legislative work was stressed, and it was decided that a luncheon meeting should be held for the county society legislative chairmen, the county society secretaries, and the legislative chairmen of the Woman's Auxiliaries. The luncheon is to be held in connection with the next meeting of the Council scheduled for February 1st. The two groups will have a joint luncheon with the program set for the legislative group in the afternoon.

The Council approved the Committee recommendation that a dinner be held for the members of the Illinois General Assembly in Springfield either in February or March, with Mr. Oblinger instructed to arrange the details.

Both Mr. Neal and Mr. Oblinger were authorized to register as representatives of the Illinois State Medical Society under the Illinois Lobbying Act.

The Council approved the Committee recommendation that the Legislative Manual developed by Mr. Oblinger be printed, and that 3,000 copies be ordered.

The Council approved the Committee recommendation that the Springfield Newsletter prepared by Mr. Oblinger, be improved in form and given a wider circulation if possible. Mr. Oblinger is to have the letter printed in Springfield rather than have the Chicago office mimeograph the material. The Chicago office will continue to address the envelopes and maintain the mailing stencils. The importance of the Newsletter was discussed and the fact was stressed that key men should receive the material, be asked to pass on the information, and post the release on hospital bulletin boards. Any physician writing to Mr. Oblinger (420 Reisch Building, Springfield) requesting the release will be placed on the mailing list, but blanket mailing is not suggested at this time.

Dr. Hopkins stated that proposed changes in the new Narcotics Control Act had been discussed at length by the Committee. One of the problems confronting the profession is the treatment of addicts, which is not covered under the Act. The Committee would request the Committee on Narcotics to submit any suggestions pertaining to the proposed legislation for consideration.

The Committee recommended that legislation pertaining to the disposition of a body or parts of a body "by will" be sponsored and/or supported by the state society. Mr. Neal stated that the Bar Association is interested in this problem and the work of the committee should be done with Council approval. The proposed legislation would permit a person to do what he cannot accomplish under the law at this time. The proposed Act was read by Mr. Oblinger, and Council approval given.

The Committee recommended that the Council approve a Public Relations dinner to be held during the annual meeting of the State Society at which a joint program with the Illinois Bar Association might be developed, and a panel program presented dealing with some of the follow-

ing subjects: subpoenas, expert witness fees, privileged communications, and psychiatrists in court. By proper Council action the committee was asked to develop such a joint program for the public relations dinner on Tuesday evening, May 19, 1959.

The committee discussed the possibility of a new workmen's compensation act at the 1959 session of the legislature. It was decided to postpone committee action until after Mr. Neal has had an opportunity to discuss the proposals with Dr. Richard J. Bennett as co-chairman of the Committee on Industrial Health.

Dr. Hopkins read the supplementary report of the Council on Medical Service to the AMA House of Delegates, and the report of the reference committee approving the resolution prepared by the AMA Council. The resolution advocated the development of the voluntary health insurance or prepayment plans for persons over 65 years of age with reduced incomes and modest resources, in a way that would be acceptable both to the recipients and to the medical profession. The proposal was that the AMA, the constituent and component medical societies, as well as physicians everywhere, expedite the development of an effective voluntary health insurance or prepayment program for the group over 65 with modest resources or low family income, and that physicians agree to accept a level of compensation for medical services rendered to this group that will permit the development of such insurance and prepayment plans at a reduced premium rate.

Dr. Hopkins urged that this subject be given wide publicity, called to the attention of Illinois Medical Service, Northern Illinois Medical Service, all physicians in the state, and be published in the *Journal*, and used in all new releases going to the membership.

Dr. Hopkins suggested that the Society again send copies of *Today's Health* to members of the General Assembly and the Illinois representatives in Congress as has been done in past years. By official action this was approved, and the Woman's Auxiliary of the ISMS was asked to take charge of the gift cards to the members of the state and federal legislature.

The fact that dues in the Illinois State Medical Society are lower than in most state medical societies was called to the attention of the Council. The program outlined by the Committee on

Medical Service and Public Relations represents the expenditure of a good deal of money, and the membership should be kept informed of activity being carried on in its behalf.

I. P. A. C. ACTIVITY

Dr. Montgomery reported as chairman of the Medical Advisory Committee to the Illinois Public Aid Commission. The group met with representatives of the Commission on December 13. Various areas in the state where problems existed were represented at the meeting, and much of the existing difficulty was solved when a better understanding of the situation was developed. The committee is asking the anesthesiologists to prepare a list of the cost of drugs for some 100 cases and establish costs in this area. The committee plans to appear before the commission and request an increase in the fees for physicians. This meeting is scheduled for the first part of February. Nine visitors who were present from various parts of the state learned what goes on as they watched the committee at work with the commission. Most of the trouble arises as a result of the failure of the local county superintendents to follow correct procedures, and because of lack of liaison between local physicians and superintendents.

COMMITTEE ON INDUSTRIAL HEALTH

Dr. Richard J. Bennett, co-chairman of the Committee on Industrial Health, distributed prepared material dealing with the problems encountered by industry in personal injury cases under workmen's compensation. The committee is considering a new workmen's compensation act, amendments to the existing law, and methods in which progress can be effected in the personal injury litigation field.

In the material distributed was: (1) a paper on "Impartial Medical Testimony" delivered by David W. Peck, previously presiding justice of the Supreme Court of the State of New York, appellate division; (2) a paper on "The Impartial Medical Testimony Project" by Howard Reid Craig, M.D., director of the New York Academy of Medicine; (3) a paper on "Impartial Medical Testimony", the partial text of a panel discussion by Harrison L. McLaughlin, M.D., of New York; (4) Rule 35 — Physical and Mental Examination of Persons; and (5) Description of the Proposed Plan for Improving

the System of Disability Evaluation in Workmen's Compensation Cases.

The vital importance of determining "the nature and extent of the injury, if any," cannot be stressed too much. Personal injury suits should run about 1 per cent of all money taken in. CTA is running 7 to 8 per cent at this time. Only one opinion should be presented before the court.

Each year legislation having to do with workmen's compensation goes to the commission. Some time during February and/or March, representatives of the Illinois Manufacturers Association and of labor sit down and work out things upon which they can both agree, and when this situation exists, things upon which they both agree usually get enacted into the law. If the medical profession has any idea regarding what it wants included in the Workmen's Compensation Act, representatives should get together with these groups and discuss the problems in detail. Neither the unions nor the Illinois Manufacturers Association like "crash" programs.

The state society committee has several recommendations to make. (1) That the Workmen's Compensation Act be amended so that one of the five commissioners is a physician; (2) have a medical advisory committee that would meet about once a month; (3) develop a state council composed of two physicians, two insurance representatives, two lawyers, and two manufacturers to work together; (4) establish some type of impartial medical testimony plan so that the judge can request an opinion, and the court and the jury will get correct information. (New York, Utah, Baltimore, and Los Angeles have the best plans now, and Utah's seems to be the outstanding state plan. Specialists are used, and their plan works.)

The Council requested that the Committee on Industrial Health and the Committee on Medical Service and Public Relations meet and develop concrete suggestions, and report at the February 1 meeting of the Council.

COMMITTEE ON CIVIL DEFENSE

Dr. Earl H. Blair reported on the Committee on Civil Defense and its activities. The committee met on November 9 during the AMA conference at the Drake Hotel. Dr. Maxwell has resigned as deputy director of civil defense in Illinois. Hospital approving authorities are now

requiring a disaster program for each hospital on a community basis. It is agreed that actual practice runs be made with full staffing in all categories with criticisms to follow. Stress liaison with other groups in the disaster relief programs—Red Cross, blood banks, and the like. All physicians should be alert on medical functions in the local disaster programs. This can be an excellent public relations effort at the local level. The committee asks that publicity be given disaster programs in the Illinois Medical Journal.

POSTGRADUATE MEDICAL EDUCATION

Dr. Fred C. Endres reported as chairman of the committee to study and evaluate the postgraduate medical education program in Illinois. The committee was composed of Dr. Endres, Dr. Howard P. Sloan of Bloomington, and Dr. Charles K. Wells of Mt. Vernon.

After studying the situation, the committee recommended: (1) That the Postgraduate Conferences continue to be sponsored by the ISMS. (2) That continued effort be made to co-ordinate these conferences with those of the Academy of General Practice in regard to time, place, and subject matter. (3) That special effort be made to provide such conferences in the thinly populated areas of the state, or in counties where the membership is small and there is no adjacent metropolitan area. The recommendations of the committee were approved, and Dr. Montgomery, as Chairman of the Council, was authorized to reappoint the members of the Committee on Postgraduate Medical Education and Scientific Service for the present fiscal year.

BELLEVILLE JUNIOR COLLEGE AND ITS NURSING PROGRAM

Dr. W. C. Scrivner of East St. Louis reported to the Council on the new college program in professional nursing at the Belleville Junior College. He told of the efforts being made to find ways to improve public relations and to assist in improving the care of the patient. As a member of the Society Committee on Maternal Welfare, he has been most interested in various phases of these activities for a number of years. Schools of nursing have closed all over downstate Illinois, and the problem of training has become more and more acute. The St. Clair County Medical Society has worked in close co-operation with other interested groups, and has developed a curriculum in nursing acceptable to the State

of Illinois and the League of Nursing, which will give the candidate reciprocity with other states. The work done at Belleville Junior College will be accepted for transfer if the candidate goes on for the full college degree. This is the only such program in Illinois at this time. Twenty-nine students were entered in the September class. The local hospitals are used as all they need to furnish are the cafeteria facilities. The medical society provides the instruction, and the students are college students. A folder outlining the program and giving the necessary information is available for the prospective student. The school program is for three calendar years; new classes start in September each year; regular college vacations are maintained except for summer sessions, which are required. The folder outlines the requirements and can be secured by anyone interested.

The St. Clair County Medical Society would like to have publicity given this unique program throughout the state, since there are some 22 other junior colleges in Illinois where similar courses might well be started. This might be the means of providing some of the nursing personnel so badly needed throughout Illinois, and it might develop into a pilot program that could well be copied throughout the country.

ISMS AND THE ILLINOIS HOSPITAL ASSOCIATION

Dr. Hesseltine reported that he, Dr. Hamilton, and Dr. Oldfield had met with representatives of the Illinois Hospital Association for the purpose of discussing problems of special concern to both groups. The IHA needs co-operation from the medical society and the problems to be faced must be dealt with by members of the hospital staff and the administrators working as a team. The role of the physician on the hospital staff and the importance of the physician to the hospital are only two of a number of problems for consideration. Closer co-operation with the hospital administrator and the staff could be mutually profitable. The chief of staff and the hospital administrator should function as a team. The Council was requested to approve this activity and designate a committee to work with the IHA to develop the details of a joint program.

COUNCIL ACTIVITY

The membership of the Illinois State Medical

Society in the Illinois Chamber of Commerce was renewed for the year 1959.

The membership of the ISMS in the Illinois Educational Association was renewed for 1959.

The resolutions submitted by Dr. Harry Mantz pertaining to various changes in the constitution and bylaws were referred to the Committee on Constitution and Bylaws for review and subsequent report at a later meeting.

The ISMS contributed \$100.00 to the Illinois Society for Medical Research.

The Council designated Dr. Richard J. Bennett as its official representative to attend the annual Joint Conference of the AMA Council on Industrial Health in Cincinnati in February.

REPORT ON STATE LABORATORY STUDY

Dr. Louis Limarzi reported as chairman of a special committee to study state laboratories. The committee met with representatives of the Illinois Association of Medical Health Officers and discussed in detail the services which should be available in state laboratories. The group had several detailed recommendations to make—that certain services should be expanded (diagnostic tests for infectious diseases, the field of Rh testing, blood grouping, and water and milk laboratory examinations). The ISMS committee was of the opinion that procedures dealing with public health measures should be developed and the information disseminated to recognized technical personnel to improve on this facility throughout the state. The committee felt that the laboratories are in a strategic position to utilize the specimens sent to them for more extensive research, and it was suggested that a research budget, on the order of \$75,000 per year, should be provided. It was agreed that there is an urgent need for new buildings for the Springfield and Chicago laboratories. In the field of toxicology, a small amount of work is being done in connection with water and air pollution tests. Urine testing for lead is being done largely at the request of hospital laboratories in cases of accidental lead poisoning in children. There is need for expansion of this service in connection with poison control programs, especially in connection with water pollution studies since toxic material may be discharged into streams without anyone's knowledge, including the operator of the plant in some instances. It was the understanding of the committee that a separate bill

covering the provision of funds and authorizations for the laboratories of the department to do toxicologic tests probably will be introduced with the endorsement of the State Society.

The Joint Committee was in agreement that while the services mentioned should be initiated or expanded, some other services now being offered should be curtailed, such as agglutination test, for enteric infections and syphilis serology. The volume of the latter is out of all proportion to the number of cases of infectious syphilis. They believed that dropping compulsory premarital serologic tests and other routine surveys for syphilis, such as pre-employment and employment examinations, would accomplish a great deal in this direction.

OTHER ACTIONS

Dr. Reisch reported that a meeting of the Journal Committee and Editorial Board had been held November 4. The Wayside Press of Mendota was selected again to print the Illinois Medical Journal for the coming year. The Editorial Board will have some definite recommendations to make at the next meeting of the Council following its next meeting scheduled for January 7.

Dr. DuPuy asked that the 1959 meeting of the Secretaries Conference in Springfield be approved.

The first meeting of the House of Delegates during the 1959 annual meeting of the ISMS was set for Monday evening, May 18.

The Council approved giving the Medical Assistants Association \$300.00 for their next year's

meeting.

The secretary was instructed to write to each licensed hospital in Illinois outlining the request made some two years ago by the AMA that a joint committee be set up by each hospital, and informing them that within a few months, a joint meeting will be held in Chicago of all hospital administrators and all hospital staff presidents, to discuss important problems faced by the two groups.

The Council adjourned at 2:20 p.m.

Respectfully submitted,

HAROLD M. CAMP, M.D. Secretary

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Wanted: old medical-surgical instruments for exhibit

The Champaign County Medical Society on May 14 will celebrate the centennial of its founding with a program designed to show the public the advancement in medical practice that has occurred over the last 100 years. This will include displays in store windows.

The society will appreciate the help of physicians in other parts of the state by loans of equipment and instruments once used by physicians. These will be shown along with present day supplies. Any material loaned will be returned immediately after the celebration.

If you have any such instruments, or know where some may be obtained, please write to Dr. William H. Schowengerdt, 301 East University Avenue, Champaign, Illinois.

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MEDICAL ECONOMICS



Over sixty-five

In December, 1958, the House of Delegates of the AMA endorsed the principle of the development of a low cost medical plan for our senior citizens. This is one of the most progressive steps ever taken by our leaders in the field of medical economics. You and I are well aware of the problem involved, and our leaders are to be congratulated for their forward efforts.

It would be well to review this resolution: "For persons over 65 years of age with reduced incomes and modest resources, it is necessary immediately to develop further the voluntary health insurance or prepayment plans in a way that would be acceptable both to the recipients and the medical profession. The medical profession must continue to assert its leadership and responsibility for assuring adequate medical care for this group of our citizens. Therefore, the Council on Medical Service recommends to the House of Delegates the adoption of the following proposal: That the American Medical Association, the constituent and component medical societies, as well as physicians everywhere, expedite the development of an effective voluntary health insurance or prepayment program for the group over 65 with modest resources or low family income; that physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such insurance and prepayment plans at a reduced premium rate."

This recommendation has been studied by the

Board of Trustees and has received its wholehearted endorsement. Now, what about us?

Many factors must be explored and considered. The individuals in this age group are a rugged and independent breed. After all, it takes quite a bit of know-how to reach 65 plus, and citizens who have done so really "have it." They are not looking for handouts or gifts. What they prefer is insurance. They expect this insurance to be paid for in a reasonable manner; they expect complete health coverage and will not be happy with anything less.

Anyone over 65 is certainly vulnerable when it comes to the probability of future illness. Knowing this, our insurance companies in general have shied away from this problem. Since the insured can do little about preventing future illness, it would seem that the burden of responsibility as to their insurability at a reasonable rate rests with the physician. We will just have to set up a fee schedule on the lowest possible level.

Physicians' fees in general are in line with the general cost of living in his community. Naturally, every physician believes his fees are low as is. Impartial surveys have brought out the facts that medical fees have not increased on a par with the cost of living index. The physician in practice today earns his keep, and receives a reasonable return on his tremendous educational investment and his enormous efforts to keep people well. His opportunity to save for the future is somewhat limited. Private prac-

tioners have no pension funds, nor do they have a retirement program. They just keep on working, making the best adjustment possible to inflation, rising costs of overhead, and multitudinous financial problems. In the face of these economic facts, how can we offer to lower our fees for one special group of individuals? Will this not set a precedent for the future, and lead other groups to demand similar sacrifice?

Probably not. We recognize that at present, many in the over 65 category are not independent when it comes to paying for medical care. Their children and relatives usually have to pool together for such a purpose. Many are without such family assistance and are cared for now through charities. This suggested insurance program will take many such individuals off the medical relief rolls. The independence that would be engendered will bring them to physicians' offices earlier in an illness. Their health will improve from this earlier contact with their physician. When we realize that a greater number of people will be eligible for private care under this program, lowered fees for a particular group will not necessarily mean a loss in revenue to the physician.

Another factor that always concerns the physician is the further encroachment of the third party into medical affairs. This fear was present when Blue Shield first went into effect but how false this fear proved during the years. Blue Shield is the physicians' nonprofit plan, and is directed by a medical board of trustees, elected at the grass roots. What better way is there than to set up our own nonprofit plan?

Since the problem of financial support for the medical care of the aged is complex, it necessitates a great deal of study. Fortunately, this has been done and is being done by various groups. Problems vary with each community. Yet we must not tarry too long in setting up our plan. None will be perfect at the outset but we must do the best we can, and change details as we go along.

To this observer, it seems that we should accept a fee for service that will be all inclusive. This is the only way to give full coverage under an insurance program. It has been said that there is strong union support for federal bills to be placed before Congress providing for health benefits under social security. In my opinion, this is pure socialized medicine. Our best alternative

against this possibility is active support of this service provided through Blue Cross and Blue Shield. Our wholehearted support and co-operation will nip this direct step toward socialized medicine in the bud. This is a positive approach toward the prevention of governmental medicine. Let each one of us physicians become fully aware of this situation and make plans at the county and state levels. The success of our efforts will do much to curtail the trend toward socialized medical care.

John R. Wolff, M.D.

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Health insurance for government employees

The principle of health insurance has been so well established it seems almost fantastic to find that a bill is to be introduced in this session of Congress to provide for such insurance for all federal employees.

Government employees are alert, educated citizens. They are capable of buying homes, automobiles, television sets, electric appliances, luxuries, and life insurance. Don't they buy health insurance, too? The commercial insurance companies are always anxious to insure such individuals. Also, the "Blue" plans have had many campaigns enrolling groups and individuals as well. Is an act of Congress necessary to provide a service that can be provided by the individual at his discretion at the present time?

Perhaps the real question is merely: Who will pay for this insurance? An act of Congress will enable the government to pay for some or all of this insurance. The "government" means you and me.

You and I want everyone in this country to have health insurance but you pay for yours and I'll pay for mine. You can buy what you need, and I shall buy what I need. We can choose our own physician and our own hospital. We can change insurance companies whenever a better program is offered that is better suited to our desires. Our fine government has a great deal to do without going into the health insurance business. If government employees are so badly off financially, why not raise the pay scale, and let them plan on their own. Some may prefer snake oil to insurance, at that. Perhaps government employees are rugged individualists like their fellow Americans.

J. R. W.

CORRESPONDENCE



Am. College of O. & G. annual meeting in April

The American College of Obstetricians and Gynecologists will hold its annual meeting in Atlantic City, April 6-8, with general sessions in Convention Hall. An attendance of about 2,000 physicians is anticipated.

Besides the presentation of papers by leading obstetricians and gynecologists from various parts of the country, there will be breakfast and clinical conferences, panels, motion picture programs, and scientific exhibits, it was announced by Dr. Robert H. Barter, Washington, chairman of the Committee on Program. One panel will deal with radiation hazards in obstetrics and gynecology, and another will cover psychosomatic aspects. A feature will be the presentation of 12 research project reports.

Dr. R. Glenn Craig, San Francisco, will deliver his presidential address on the second day. The installation of Dr. John I. Brewer, Chicago, as president, will take place on the final day. Dr. Brewer is professor of obstetrics and gynecology, Northwestern University Medical School.

Among those participating in the scientific program will be Drs. Herbert E. Schmitz and James H. McClure, Chicago.

Further information may be had by writing to Mr. Donald F. Richardson, executive secretary, the American College of Obstetricians and Gynecologists, P. O. Box 749, Chicago 90.

Clinics for crippled children listed for March

Twenty one clinics for Illinois' physically handicapped children have been scheduled for March by the University of Illinois, Division of Services for Crippled Children. The division will count 17 general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical, social and nursing service. There will be two special clinics for children with cardiac conditions, one for children with rheumatic fever, and one for cerebral palsied children.

Clinics are held by the division in co-operation with local medical and health organizations, both public and private. Clinicians are selected among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

March 4 — Carmi, Carmi Township Hospital

March 4 — Hinsdale, Hinsdale Sanitarium

March 4 — Rock Island (Cerebral Palsy), Foss Home, 3808 Eighth Avenue

March 5 — Sterling, Community General Hospital

March 6 — Chicago Heights (Cardiac), St. James Hospital

March 10 — East St. Louis, St. Mary's Hospital

March 10 — Peoria, Children's Hospital
 March 10 — Shelbyville, Methodist Church
 March 11 — Joliet, Will County T.B. Sanitarium
 March 12 — Sparta, Sparta Community Hospital
 March 12 — Springfield, St. John's Hospital
 March 17 — Alton, Alton Memorial Hospital
 March 18 — Evergreen Park, Little Company of Mary Hospital
 March 18 — Jacksonville, Passavant Hospital
 March 19 — Decatur, Decatur-Macon County Hospital
 March 19 — Elmhurst (Cardiac), Memorial Hospital of DuPage County
 March 19 — Rockford, St. Anthony's Hospital
 March 24 — Effingham (Rheumatic Fever), St. Anthony Hospital
 March 24 — Peoria, Children's Hospital
 March 25 — Aurora, Copley Memorial Hospital
 March 25 — Centralia, St. Mary's Hospital

Amn. College of Surgeons meeting in St. Louis

The American College of Surgeons will hold a sectional meeting in Kiel Auditorium, St. Louis, March 9-12.

The program will include hospital clinics, panels, symposia, scientific papers, technical exhibits, medical motion pictures and cine clinics in general, thoracic, ophthalmic, and orthopedic surgery; urology; and gynecology and obstetrics.

Hospital clinics will be held in the Jewish, St. Louis City, St. Louis University, Barnes, St. Luke's, and Veterans Administration Hospitals. Tours and demonstrations are scheduled for other hospitals.

There will be a nurses' program on all four days.

Mayo clinical reviews

Staff members of the Mayo Clinic and the Mayo Foundation for Medical Education and Research will present a program of lectures and discussions on problems of current interest in general medicine and surgery at Rochester, Minn., April 13-15. Up to 21 hours of Category I ACGP credit may be obtained.

There are no fees. The number of physicians who can be accommodated is limited. Those wish-

ing to attend should write to the Clinical Reviews Committee, Mayo Clinic, Rochester.

Nuclear medicine meeting

The Southwestern Society of Nuclear Medicine will hold its fourth annual meeting at the Roosevelt Hotel, New Orleans, March 14-15.

Leukemia grants available

The Leukemia Guild of Missouri and Illinois will have about \$100,000 available July 1 for grants for investigative work in blood dyscrasias. Requests for grants under \$15,000 a year will be given preference.

Write to Mr. Ralph Shower, executive director, Leukemia Guild of Missouri and Illinois, 4530 Forest Park Boulevard, St. Louis 8, for application forms.

ICS awards for manuscripts on obstetrics, gynecology

The Division of Obstetrics and Gynecology of the International College of Surgeons announced its second annual competition for two awards for the best manuscripts on a phase of obstetrics and gynecology. One award will be for \$500 and the other for \$300.

The contest is limited to (1) interns, residents, or graduate students in obstetrics and gynecology, and (2) to those engaged in the practice or teaching of the specialty.

Manuscripts must be submitted by June 1 to Dr. Harvey A. Gollin, 55 East Washington Street, Chicago 2. Further information on contest rules may be had from Dr. Gollin. Dr. August H. Daro, Chicago, is secretary of the division.

Trudeau society to meet

A symposium on smoking and lung cancer and another on emphysema will be among the highlights of the 54th annual meeting of the American Trudeau Society, medical section of the National Tuberculosis Association, to be held in Chicago, May 25-28.

The meeting, to be held in the Palmer House, will be in conjunction with that of the NTA. There also will be panels and presentation of

papers on recent clinical and laboratory research in tuberculosis and other respiratory diseases.

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Surgical research award

The Chicago Surgical Society announced its 1959 Edwin M. Miller Award of \$500 for surgical research, which will be presented at the May 1 meeting of the society.

Contestants must be residents of Cook County and be preparing for a surgical career. Manuscripts must cover work not previously published and must be submitted by March 1.

Further information may be had from Dr. Robert L. Schmitz, secretary, 55 East Washington Street, Chicago 2.

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Invite papers for meeting

The 13th International Congress on Occupational Health will be held in New York, July 25-29, 1960.

The program committee is inviting the submission of papers on the following aspects of occupational health: administrative, medical, and surgical practices; education and training; social

and legal; environmental hygiene and factors; work physiology and psychology; specific industries; general.

Abstracts should be presented to Dr. Irving R. Tabershaw, program chairman, International College on Occupational Health, 375 Park Avenue, New York, before January 1, 1960.

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Gastroenterologists to meet

The Association of the National European and Mediterranean Societies of Gastroenterology will be held in Leiden, the Netherlands, April 20-24. The main themes will be (1) pathology of the small intestine, and (2) hepatitis.

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Rural health conference

"Horizons in Rural Health" will be the theme of the 14th National Conference on Rural Health, March 5-7, at the Broadway Hotel, Wichita, Kan., sponsored by the AMA Council on Rural Health. Special stress will be put on mental health, problems of the aging, nutrition, dental health, costs of medical care, and various aspects of health insurance.

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Aerosol Rx in dermatitis

The aerosol form of Meti-Derm® was introduced recently as an alternate vehicle of therapy in conditions amenable to treatment with Meti-Derm cream. It contains 50 mg. prednisolone, isopropyl myristate, and Freon® as a propellant. Since it appeared the aerosol might possess certain advantages over the cream it was decided to evaluate it among a group of dermatologic patients. Results were at least as good as those that could have been expected from the cream, and there were no adverse reactions. All patients with atopic and contact dermatitis reported rapid relief of symptoms, often during the first day of use, and objective evidence of improvement usually followed within several days. Within

one hour, after two applications, there was good relief in infants with eczema. Housewives with contact eczema experienced nearly complete relief within one week and they were advised to use rubber gloves thereafter. Treatment usually was initiated immediately after an acute outbreak, and symptoms disappeared far more rapidly than could have been expected in self-limited conditions. The special advantages of Meti-Derm aerosol are that it is nongreasy and nonstaining, lasts longer than the cream, and is more uniformly applied. It is especially suitable when a large or hairy area must be medicated. *James Q. Gant, Jr., M.D. Meti-Derm Aerosol in Dermatoses. M. Ann. District of Columbia, Oct. 1958.*

THE P. R. PAGE

John A. Mirt



A legislative job ahead

There are 38 new members in the Illinois State Legislature for the present session—13 in the Senate and 25 in the House. Forty-five senators and 152 representatives were returned in the last election.

This means considerable work must be done in cultivating the new members as well as keeping all informed concerning the viewpoints of medicine on pending measures.

It is certain that many of the bills to be presented, if enacted, will bring about a poorer quality of medical care and thus be a disservice to the public. It will be up to all physicians to contact their representatives in the Legislature and point out the dangers.

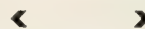
One county medical society in another state summed up the problem in one sentence: "If we sit complacently by and let a few people railroad bad legislation through because we are too lazy to open our mouths, we have no one to blame but ourselves for the troubles we must later face."

Public relations tip

One of the nicest ways we know to make people feel important and appreciated (and that, after all, is public relations at its best) is to thank them for their efforts. After a heavy snowfall in New York State last winter someone in the Schoharie County Medical Society remembered that medical service would have come to a standstill if highways hadn't been kept open.

So the society sent thank you notes to the county superintendent, town highway superintendents and employees, and the many volunteers who made it possible for doctors to visit their patients.

How many people in your community are due a word of gratitude from the county medical society?—Jackson County (Mo.) Medical Society Weekly Bulletin, December 27, 1958.



Allergy and enzymes

Another approach to allergic diseases advocated recently by Becker considers the allergic reaction to be mediated by enzymes intimately associated with complement. Experimental evidence for this was obtained in the relatively simple immunologic reaction involving red cell hemolysis. Here it was shown that the blocking of proteolytic enzyme activity by antienzymes prevented hemolysis and that without the presence of sensitized cells the proenzyme involved is not converted into the enzyme necessary for the reaction. This basic chemical approach to allergy fits in with the present trend in medicine to identify disease entities in terms of enzyme patterns of reactions as advocated by Wroblewski. Should these observations be confirmed or extended, and there is evidence to suggest such possibilities, the search will go on for suitable drugs which would interfere with enzymatic reactions involved in the antigen-antibody interaction. *Samuel J. Prigal, M.D. Allergy, Infection, and the Psyche. New York J. Med. Oct. 15, 1958.*

AT THE EDITOR'S DESK



NURSE PLACEMENT SERVICE

The Illinois Nurses' Association consulting and placement service attempts to match the nurse and the job through careful screening and selection of all concerned. Finding the right nurse for the right people reduces employment problems for nurses as well as for physicians. The nurse benefits because she is guided in her career by a counsellor in her own profession. The placement service has compiled professional records for 7,400 nurses in its 12 years of operation. The education and employment experience of the nurses are recorded and in referrals, the personality and special aptitudes are considered.

BIG BEN RETIRES

The research dog hero of 1958 is a three year old from the deep south. He is Big Ben, a clownish, roguish canine who twice survived a new perfusion treatment for brain tumor at Tulane University. He is now retired and the adopted pet of a New Orleans family.

A FLEXIBLE GOWN

The Palm Patient gown was designed by a registered nurse who is night supervisor at Grant Hospital. The gown contains a multitude of snaps and flaps that allows instant exposure for examination, intravenous medication, bandaging, and other hospital functions. The flexibility of the gown permits easy changing in immobile patients and those receiving intravenous feeding.

CORTICOSTEROID FOLLOW-UP

Ten of the 20 Britons who were the first to receive cortisone eight years ago are still able to work. Five are comfortable at home and an equal number have died. Only one of these fatalities was from a condition connected with arthritis and the hormone treatment for it. Dr. Oswald Savage, of West London Hospital, is convinced after his experience that the corticosteroids enabled innumerable persons to become independent and less burdensome to their families. The hormones improved morale and many patients have been able to return to or remain at their previous occupations.

DIVERSIFICATION

This is the age of diversification and it is becoming increasingly difficult to determine who owns who and what. The Borden Company, for example, acquired Marcelle Cosmetics, Inc., makers of hypoallergenic cosmetics. Gillette concentrates on razor blades but also sells a cough medicine along with pens, pencils, and permanent waves. Carter, of "little liver pill" fame, is doing well with Miltown. The medical profession is following the opposite path. It is becoming less diversified and more specialized. We may lose in the long run by being swallowed up by larger and more diversified organizations.

If you can't diversify the product, you can change the odor. Pine scented Lysol is now available.

PATIENTS FOR TEACHING

Dr. Lowell T. Coggeshall, dean of the division of biological sciences, University of Chicago, believes that in the future most, if not all, medical teaching will be done on private patients. This is reasonable because almost everyone in the United States soon will have health and hospital insurance. Our major charity hospitals derive considerable income from patients who have hospital, medical, and surgical coverage. Paying patients have been used for teaching for more than a quarter of a century at the University of Chicago. Students and staff are satisfied and many of the paying patients "feel proud" about participating in medical education.

NEW ASPIRATOR

A portable, 10 pound aspirator (Farr) was placed on the market recently. It requires no electricity and maintains a high vacuum via a unique foot pedal action. The vacuum created remains constant even though pumping is interrupted.

SUPERVISION FOR MEDICAL RESEARCH FUNDS

Federal appropriations for medical research have zoomed and many interested authorities are concerned with the management of these vast and diversified projects. Francis Boyer, chairman of the board of Smith Kline & French Laboratories, told the A.A.A.S. that in his opinion it is time to establish a permanent, top level committee to advise Congress and the federal agencies. Medical research is complicated and "is more than pouring money into one end of a machine and cranking out good health at the other." The pharmaceutical industry has an interest in the wise allocation of research funds;

their own expenditures were estimated at \$135 millions in 1958. The medical profession and medical schools should show as much interest. The various institutes of health are strong competition for the Ph.D. and other workers in basic sciences who form the teaching nucleus of medical institutions. No one will deny the wisdom of national medical research but we ought to get our money's worth as well as to direct future projects along sensible and logical lines.

DISASTER KIT

The U.S. Army Medical Service has prepared an emergency medical packet for use in a mass casualty situation. It is more than a first aid kit and is designed to be used by nonmedical personnel. The packet is a single unit containing nine component cartons: two master packs containing Dextran® and miscellaneous items, one fracture pack, two burn packs, and four wound packs. It contains 23 items for the treatment of approximately 100 casualties for about 72 hours.

FULL TIME PHYSICIANS

Thirty-five per cent of physicians today are on full time salary in hospitals and other agencies compared to nine per cent in 1930.

PHARMACEUTICALS

Poquil pyrvinium pamoate is Parke, Davis & Company's new raspberry flavored pinworm remedy. A single dose was reported to be curative in 95 per cent of 100 Florida victims.

Irwin, Neisler & Co. have a new oral ureterospasmolytic, Atratan, they say gives sustained relief in renal colic. Each tablet contains one mg. of atropine tannate, with the Durabond principle of oral respiratory release, which controls absorption of the drug. In many instances, there is no need for supplementary narcotics.

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NEWS of the STATE



COOK

HOSPITALS. The top scorers in the civil service examination for the specialties at Cook County Hospital are the following physicians: surgery, Manuel Lichtenstein; orthopedics, Donald S. Miller; urology, J. Lester Wilkey; pathology, George Milles; pediatrics, Samuel J. Hoffman; dermatology, Theodore Cornbleet; contagious diseases, Heyworth N. Sanford; thoracic surgery, George Holmes; tuberculosis, Leroy H. Berard; otolaryngology, Samuel J. Pearlman; gynecology, Aaron Kanter; maxillofacial surgery, George K. Lewis; medicine, Edmund F. Foley; neurology, Irving C. Sherman; neurological surgery, Paul Rosenbluth; and ophthalmology, Theodore Zekman. It is customary to offer the winners the chairmanship of the department.

Seven medical departmental chairman have been appointed by the board of trustees of Presbyterian-St. Luke's hospital. They are Drs. Stanton A. Friedberg, otolaryngology and bronchoesophagology; Francis J. Gerty, neuropsychiatry; Edwin C. Graf, urology; John B. Haeblerlin, dermatology; George M. Hass, pathology; William H. Holmes, dental surgery; and Fay H. Squire, radiology.

Dr. Morris Weiss has been named medical director of Mandel Clinic, the outpatient division of Michael Reese Hospital Medical Center.

Newly elected president of the medical staff at Forest Hospital, Des Plaines, is Dr. Stanislaw A. Maslanka.

Dr. Donald L. Kessler has been elected medical staff president of St. Joseph Hospital.

Dr. A. G. Cesare has been re-elected president of the South Chicago Community Hospital medical and dental staff.

There is to be a new diagnostic center building for the University of Chicago Clinics, with basement and subbasement connected to corresponding floors of existing buildings. This diagnostic center will make immediately available to entering patients a vast array of scientific resources.

MEETING. The Society of Medical History of Chicago met Jan. 14, at the Institute of Medicine for two talks: One, "Francesco Redi—Physician, Microbiologist, and Poet," was given by Eric W. Cochrane, University of Chicago; and the other, "Surgical Pathology in the Renaissance," by Leo M. Zimmerman, Chicago Medical School.

At the January meeting of the Forest Hospital, Des Plaines, Dr. H. Zimmerman, of the Chicago Medical School, spoke on "Drug Hepatotoxicity with Particular Reference to Newer Psychiatric Drugs."

LECTURES. Completing the fifth annual series of lectures on "The Growth of Medicine," are "Lister" by Michael Mason, professor of surgery on Feb. 24; "Pare" by Barry J. Anson, chairman and Robert Laughlin Rea professor of Anatomy on Mar. 3; and "Laennec" by Jerome R. Head, associate professor of surgery on Mar. 10. The speakers are all on the Northwestern

University Medical School faculty. Members of the medical profession and the public are invited to these lectures at 8 a.m. in room 641 of the medical school, 303 E. Chicago Ave., Chicago.

MEETING. The Chicago Neurological Society had the following program at their January meeting: "Head-Banging in Infants and Children," Harvey Kravitz, Zelda Teplitz, and Vin Rosenthal; "The Direct Pyramidal Tract in Man," Joseph A. Luhan; and "Pneumosubdural," Bahij S. Salibi.

MEETING. The mid-winter meeting of the Chicago Society of Industrial Medicine and Surgery, Jan. 21, had "Employment of the Physically Handicapped and Legal Responsibilities," as the topic for discussion by Lloyd E. Hamlin, M.D., medical director, American Brake Shoe Company; Philip C. Klohr, attorney at law; N. Gillmor Long, M.D., resident surgeon, Lumbermen's Mutual Casualty Company; and George Sawyer, formerly of Liberty Mutual Insurance Company. Dr. H. Glenn Gardiner, medical director, Inland Steel Company, acted as moderator.

TRUSTEE. Dr. Derrick Vail, Chicago was elected to serve as trustee of the National Medical Foundation for Eye Care.

GRANT AND AWARDS. Dr. Francis L. Lederer, head of the department of otolaryngology, University of Illinois has given the university \$8,000 to establish the College of Medicine Otolaryngologic Fund.

A three year grant totaling \$156,000 was awarded to Dr. Jerome Cohen, Wilmette, associate professor at Northwestern University Medical School, to study blindness in children. The grant was from the Institute of Neurological Diseases and Blindness, of the United States Public Health Service.

Two Chicago surgeons are among 10 leaders of American medicine who have been voted distinguished service awards for "significant contributions to human health and welfare." They were nominated by the deans of medical schools and readers of *Modern Medicine*, a publication that confers the prizes annually. Dr. Willis J. Potts, surgeon in chief of Children's Memorial Hospital was cited for his "significant advancement of surgical correction of congenital anomalies and his continuing influence in development of pediatric surgery." Dr. Paul C. Bucy, profes-

sor of surgery at Northwestern University Medical School, received his award for "research elucidating the function of the motor cortex and leadership in clinical neurologic surgery."

Two professorships in nutrition and metabolism, the first to be endowed specifically in this field in a medical school, have been established at Northwestern University Medical School. The first chair, the Tom D. Spies Professor of Nutrition and Metabolism, will be awarded to Dr. Robert E. Stone, and the second professorship, as yet unnamed, will be held by Dr. Tom D. Spies of the Nutrition Clinic, Hillman Hospital, Birmingham, Alabama.

Dr. Marvin Ziporyn will head an expanded residency training program in psychiatry and neurology at Chicago Medical School. A grant of \$15,500. from the U.S. Public Health Service will finance the program.

FULTON

MEETING. Dr. Robert Rutherford, Peoria, discussed "Management and Treatment of Diabetes," at the January meeting of the Fulton County Medical Society.

HENRY

MEETING. Dr. Ralph F. Davis spoke on "Present Day Radiation Dangers and Protective Measures," and Dr. Harold Swanberg spoke on "Adams County Society Major Learning Program and Achievement Awards," at the January meeting of the Henry County Medical Society.

KNOX

NEW OFFICERS. Knox County Medical Society officers for 1959 are: Drs. Jay Bowman, president; Fred Stansbury, vice president; and R. L. Cannon, secretary-treasurer.

MEETING. John F. Schaich, supervisor of the crime laboratory, State of Illinois, spoke on "The Problem of Expert Opinion," at the January meeting of Knox County Medical Society. This meeting was held jointly with the dentists and lawyers of Knox County.

LAKE

MEETING. Dr. Harold Voris, professor of neurosurgery, Stritch School of Medicine spoke on "Head Injuries," at the January 13 meeting of the Lake County Medical Society. At the

January 29 meeting, Dr. Joseph R. Shaeffer, chairman of Subcommittee on Disaster, American College of Surgeons discussed "Medical Problems Peculiar to Disaster."

LASALLE

MEETING. Dr. Carl E. Westmark, medical department, Blue Cross-Blue Shield, spoke at the January meeting of the LaSalle County Medical Society on "The Physician, Blue Cross, and Blue Shield."

MACON

NEW OFFICERS. Macon County Medical Society officers for 1959 are: Drs. James B. Waller, president; Stanley E. Goldstein, secretary; and William T. Couter, treasurer.

RETIREMENT. Dr. C. Martin Wood has retired, after 59½ years of practicing medicine in Decatur. Dr. Wood is a past president of the Macon County Medical Society and a 50-year member of the Illinois State Medical Society and the American Medical Association. He is a former president of the Decatur and Macon County Hospital staff and an honorary member of both the Decatur and Macon County and St. Mary's Hospital staffs. Outside his profession he has been an avid traveler and is interested in photography. As to his future plans he remarked "Have camera, will travel."

Dr. Lee O. Frech retired Jan. 1 after 48½ years of practicing medicine. He opened his office in White Hall and came to Decatur in 1921 after further studies in the then new specialty of pediatrics. Dr. Frech is a member of the American Academy of Pediatrics, is a board member of the academy's Illinois chapter, and is a past president of the General Illinois Pediatric Society. He also is a member of the Academy of Internal Medicine, the American Medical Association (House of Delegates from 1939-1948), the Illinois State Medical Society, and a past president of the Macon County Medical Society. He has no plans but to go to his son's home in California for a visit and after that "Don't worry, I'll find something to do," he said.

MORGAN

NEW OFFICERS. Morgan County Medical Society officers for 1959 are: Drs. Harold V. Norris, president; Harvey D. Scott, vice president; and Thomas W. Auner, secretary-treasurer.

PEORIA

MEETING. Dr. James Priestley, Mayo Clinic spoke on "Gastric Carcinoma," at the January meeting of the Peoria Medical Society.

PERRY

NEW OFFICERS. Perry County Medical Society officers for 1959 are: Drs. Julius J. Weinberg, president; Gilbert H. Edwards, vice president; and Richard T. Matlavish, secretary-treasurer.

PIKE-CALHOUN

NEW OFFICERS. Pike-Calhoun County Medical Society officers for 1959 are: Drs. James E. Goodman, Jr., president; B. J. Rodriguez, vice president; and James H. Rutledge, secretary-treasurer.

ROCK ISLAND

MEETING. "Antibiotic Therapy and the Resistant Staphylococcus Infections," was the topic discussed by Dr. Mark H. Lepper at the February meeting of the Rock Island County Medical Society.

SANGAMON

MEETING. At the regular January meeting of the Sangamon County Medical Society, the annual memorial service was conducted by Rev. Fr. Joseph C. Canella, C.S.V. Dr. Alton J. Morris spoke on "Field Trials with Asian Flu Vaccine," and Dr. Basilius Zaricznyj discussed, "Relationship Between Trauma and Stomach Motility." The 1959 officers are: Drs. William DeHollander, president; A. E. Steer, vice president; and E. M. Janzen, secretary.

ST. CLAIR

NEW OFFICERS. St. Clair County Medical Society officers for 1959 are: Drs. L. Tegtmeir, president; C. Bauman, vice president; and J. Hipkind, secretary.

VERMILION

OFFICERS. Vermilion County Medical Society officers for 1959 are: Drs. Paul E. Hepner, president; John S. Curtis, vice president; and L. W. Tanner, secretary-treasurer.

GENERAL

GALESBURG STATE RESEARCH HOSPITAL.

Galesburg Research Hospital in 1955 became the first mental hospital in Illinois and the fifth in the United States to receive full approval of the commission upon recommendation of the central inspection board of the American Psychiatric Association. Again, after having been inspected and evaluated by the Joint Commission on Accreditation of Hospitals, it has been certified for a period of three years.

DIXON STATE SCHOOL. Hill Top, Dixon State School's half-way house for men, held open house during the holiday season. The new unit, which opened Aug. 28, 1958, accommodates 12 male residents between the ages of 18 and 40, and serves as "the final step in the school's total rehabilitation program designed to return the residents to society where they may function as self-sufficient citizens."

TV. The premier of a television program entitled Nutrition and Public Health, featuring the Oak Park Health Department, took place on Channel 11, Jan. 2. The program is part of a series of 13 kinescopes on nutrition entitled "The Balance."

FOUR AIR FORCE PHYSICIANS FROM ILLINOIS. In our December issue of IMJ we carried news of the retirement of Major General Dan C. Ogle (Keithsburg) as Surgeon General of the United States Air Force and the appointment of Major General Oliver K. Niess (Belleville) to fill this post. Now, word comes from the Headquarters United States Air Force, that two more Illinois air force physicians are on the roster. Major General Olin F. McIlroy (Polo) entered active duty for the air force in 1928 and has served in many commands. He is rated as Chief Flight Surgeon and is responsible for more than 200 new medical and dental facilities being authorized in the air force. Major General Wilford F.

Hall (Mount Vernon), Surgeon of the Air Materiel Command, also entered active duty in 1928. From 1954-1957 he served as chief medical officer, North Atlantic Treaty Organization in Paris, France.

MEETING. Chicago physicians taking part in the Southeastern Regional convocation of the International College of Surgeons held in Miami Beach, Jan. 4-7, included Drs. Edward B. Allen, Oscar L. Becker, Edward L. Compere, August Daro, Robert J. Freeark, Manuel Lichtenstein, George F. Lull, Ross T. McIntire, Jerome Moses, Peter A. Rosi, Lindon Seed, Philip Thorek, Max Thorek, and Francis D. Wolfe.

APPOINTMENT. Dr. Kenneth B. Babcock of Chicago, has been appointed to the board of directors of the American Hospital Association, and its delegate to the Joint Blood Council.

MEETING. Dr. Kenneth L. Roper, assistant professor of ophthalmology at Northwestern University and a member of the senior attending staff, Chicago Wesley Memorial Hospital was a speaker at the 1959 meeting of the New England Ophthalmological Society in Boston. His topic was "The Cataract Operation: A Study of Details."

LECTURES ARRANGED BY THE ILLINOIS STATE MEDICAL SOCIETY:

ELMER BERNSTEIN, clinical associate in medicine, Stritch School of Medicine of Loyola University, addressed the Rodfei Zedek Social Club of the Jewish Community Centers, January 14, on "Live Longer and Enjoy It."

SOL ALTSCHUL, assistant professor of psychiatry, University of Illinois College of Medicine, addressed the Temple Sholom Golden Age



Maj. Gen.
Oliver K. Niess



Maj. Gen.
Dan C. Ogle



Maj. Gen.
Olin F. McIlroy



Maj. Gen.
Wilford F. Hall

Club, January 15, on "Live Longer and Enjoy It."

GEORGE W. FERENZI, clinical instructor in the Department of Medicine, Stritch School of Medicine of Loyola University, will address the Gage Park Woman's Club at the Field House, March 10, on "Live Longer and Enjoy It."

DEATHS

PHILIP L. ARIES*, Oak Park, who graduated at the University of Illinois College of Medicine in 1923, died December 10 in Mt. Sinai Hospital, aged 60. He was professor of pediatrics at the Chicago Medical School, attending pediatrician at Cook County and Mt. Sinai Hospitals, and treasurer of the Chicago Pediatric Society.

ELMER E. BOUSLOUGH, Aurora, who graduated at the Hahnemann Medical College and Hospital in 1893, died in the Galena Boulevard Hospital, July 21, aged 94.

GROVER C. BROWN*, Ste. Marie, who graduated at Barnes Medical College, St. Louis, in 1905, died Nov. 30, aged 74.

WILLIE MAE CLIFTON (Freeman), Northfield, who graduated at Woman's Medical College of Pennsylvania in 1932, died September 27, aged 52. She was a member of the attending staff of the Children's Memorial Hospital.

JOHN JOSEPH CONDON, Chicago, who graduated at Northwestern University Medical School in 1911, died October 13, aged 69, of carcinoma of the lung. He formerly practiced in Bloomington, where he was a member of the staff of St. Joseph Hospital.

RALPH A. DAVIS*, Chicago, who graduated at Northwestern University Medical School in 1925, died December 10, aged 59. He was assistant professor of ophthalmology at Northwestern University Medical School, and a member of the staffs of Chicago Wesley Memorial and Swedish Covenant Hospitals.

MELVIN L. HOLE*, Phoenix, Arizona, formerly of Danville, who graduated at Northwestern University Medical School in 1911, died December 12, aged 70.

CHARLES H. HULICK*, Shelbyville, who graduated at the Eclectic Medical College, Cincinnati, in 1911, died December 10, aged 70. He was formerly councilor for the Seventh District of the Illinois State Medical Society.

JAY G. JONES*, Chicago, who graduated at Northwestern University Medical School in 1911,

died December 12, aged 73. He was a member of the staff of Grant Hospital.

JACOB THOMAS KESSINGER, Hartford, who graduated at Kentucky University Medical Department, Louisville, in 1904, died October 24, aged 91.

DONALD B. KNOWLES*, Chicago, who graduated at Northwestern University Medical School in 1931, died December 30, aged 51. He was president of the medical staff of Roseland Community Hospital, a member of the Jackson Park Hospital staff, and medical director for the Acme Steel Company.

LOUIS CHARLES KVITEK*, Hinsdale, who graduated at the Chicago College of Medicine and Surgery in 1916, died October 11, aged 67.

ALFRED LEWY*, Chicago, who graduated at the Chicago Homeopathic Medical College in 1897, died December 15, aged 85. He was attending otolaryngologist at the Illinois Eye and Ear Infirmary for 40 years; a member of the staffs of Mt. Sinai, Chicago Wesley Memorial, and County Hospitals. A former president of the Chicago Laryngological and Otological Society, he had possessed for 10 years the Silver Cane for the oldest active member of this Society. A member of the "Fifty Year Club" of the Illinois State Medical Society, he had practiced medicine for 60 years.

JOHN S. McDAVID*, Oak Park who graduated at Northwestern University Medical School in 1924, died January 4, aged 60. He was a member of the staffs of West Suburban, Oak Park, and Children's Memorial Hospitals.

WILLIAM G. MOTEL*, Chicago, who graduated at the University of Illinois College of Medicine in 1937, died December 9, aged 46. He was a member of the staff of Michael Reese Hospital.

ANSON L. NICKERSON*, Kankakee, who graduated at Rush Medical College in 1904, died December 25, aged 81. He was a former president of the Kankakee County Tuberculosis Association, and had practiced medicine in Kankakee County for 53 years.

THOMAS W. PARSCHE*, Chicago, who retired to Ocean Springs, Miss., 18 months ago, graduated at Rush Medical College in 1903. He died in Gulfport, Miss., December 9, aged 77. A member of the "Fifty Year Club" of the Illinois

*Indicates member of the Illinois State Medical Society.

State Medical Society, he had been on the staff of Edgewater Hospital for 54 years.

CLARENCE T. PLAUT*, Chicago, who graduated at Loyola University School of Medicine in 1926, died January 5, aged 57. He was a member of the medical staff of Jackson Park Hospital.

GUY V. PONTIUS*, Chicago, who graduated at the University of Illinois College of Medicine in 1923, died January 4, aged 61. He was senior attending surgeon at Presbyterian-St. Luke's Hospital, consulting surgeon at Illinois Central Hospital and St. Francis Hospital in Blue Island, and associate professor of surgery at Northwestern University Medical School.

FRANK T. POTTS*, Decatur, who graduated at Rush Medical College in 1904, died July 29, aged 83.

MATTHIAS HARVEY SAWYER*, retired, Ottawa, who graduated at Sioux City College of Medicine in 1904, died October 13, aged 79, of bronchopneumonia. He was at one time health

officer of Ottawa, and county coroner from 1950 to 1952; he was a past president of the LaSalle County Medical Society.

EDWARD G. SCHUSSLER*, Oak Lawn, who graduated at the Chicago College of Medicine and Surgery in 1908, died December 16, aged 72. He was a member of the staffs of South Chicago and Little Company of Mary Hospitals.

JOSEPH T. TWOHEY*, Chicago, who graduated at Loyola University School of Medicine in 1932, died December 27, aged 50. He was a member of the staff of St. Anne's Hospital.

PAUL H. WEZEMAN*, Oak Park, who graduated at Chicago College of Medicine and Surgery in 1914, died December 21, aged 75. He had been a member of the staff of West Suburban Hospital for over 40 years.

CARL E. ZANGER*, Chicago, who graduated at Northwestern University Medical School in 1920, died July 17, aged 64.

*Indicates member of the Illinois State Medical Society.

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The combination of Vioform® and hydrocortisone has proved to be one of the most valuable topical remedies for the treatment of a number of dermatoses. These include seborrheic dermatitis, particularly seborrheic dermatitis of the face, ears, neck, and folds. The drug was found to be useful in controlling nummular eczema and eczematoid eruptions of the hands due to atopic dermatitis and alkali damage type of irritation. Healing hand eczemas depends on correcting the causative mechanism, and in the cases studied this apparently was accomplished by reducing alkali damage.

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ing, M.D. and J. B. Howell, M.D. Vioform-
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Texas J. M. Nov. 1958.*

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Pulmonary Embolism

CHARLES F. DOWNING, M.S., M.D., DECATUR

The importance of pulmonary embolism in clinical medicine is enhanced by the increasing population age and by better diagnosis and control of common pulmonary infectious disorders. Improvement in diagnostic techniques, together with the advent of anticoagulants also have increased interest in this condition.

Cecil and Loeb¹ believe pulmonary embolism is found in approximately 10 per cent of all autopsies and causes two to three per cent of all deaths. Castleman² has found that 90 per cent of all cardiac patients and 58 per cent of all post-operative patients autopsied demonstrated pulmonary emboli. Many were only incidental findings; in others, emboli contributed to or caused the patient's death.

The incidence of fatal pulmonary embolism actually is higher in nonsurgical than in surgical patients³. Approximately 30,000 deaths annually are estimated to occur from pulmonary embolism⁴. The real significance of this is better appreciated if we compare the 12,000 deaths from tuberculosis in the United States and the 40,000 people who lost their lives in automobile accidents in 1956. A recent study at the Graduate Hospital in Philadelphia disclosed that 60 pulmonary emboli occur per year in their hospital, considerably exceeding pneumonia (33 per year) or bronchogenic carcinoma (30 per year). Our greater awareness of this problem and our more extensive operations also contribute to the rise of this disease in modern hospitals. The figures on

the incidence vary widely and the medical literature on all facets of the subject is confusing and contradictory as pointed out by DeBakey⁶.

PREDISPOSING FACTORS

Pulmonary embolism is more common in older patients where it frequently is associated with heart disease, neoplasms, and major surgical procedures⁵. Inactivity, especially bed rest, numerous infections, subacute bacterial endocarditis, auricular fibrillation, and thromboangiitis obliterans also predispose to venous thrombosis and pulmonary embolism. In younger patients it often is the result of minor injuries or fractures.

This disease may precipitate or complicate heart failure; it frequently complicates myocardial infarction^{7,8}. Operations on the pelvis or laparotomies with extensive resection of tissue especially predispose the patient to the development of venous thrombosis and pulmonary embolism. Allen, Barker, and Hines⁹ feel that pulmonary embolism also occurs especially in the puerperium and in those over 40 as well as in patients with cancer, varicosities, previous history of thromboembolism, severe injuries, obesity, polycythemia, anemia, or infectious diseases. In one study of age in this disease it was found that 82 per cent of patients with thromboembolic disease were over 40¹⁰. Other factors deemed important in predisposing to pulmonary embolism are: occlusive arterial disease, enlarged hearts, and general debilitation. Approximately 90 per cent

of pulmonary emboli will occur in a predictable 30 per cent of patients¹¹. Prolonged sitting, especially in a relatively cramped position, as well as the inactivity of the hemiplegic patient are predisposing factors in pulmonary embolism. No discernible predisposing factor can be found in approximately 6.5 per cent of cases¹².

In summary, factors predisposing to pulmonary embolism are¹³:

Preventable or treatable:

- 1 — Obesity
- 2 — Varicose veins
- 3 — Anemia
- 4 — Polycythemia
- 5 — Dehydration
- 6 — Shock
- 7 — Heart Failure
- 8 — Infectious Disease

Conditions that cannot be changed directly:

- 1 — Advancing age
- 2 — Bed rest
- 3 — Previous venous thrombosis
- 4 — Peripheral arterial insufficiency
- 5 — Pregnancy (in the puerperium)
- 6 — Surgical operations
- 7 — Injuries
- 8 — Burns
- 9 — Cancer
- 10 — Myocardial infarction

CAUSATIVE FACTORS

The causes of venous thrombosis and the possible resultant pulmonary embolism are generally considered to be: venous retardation; intimal vessel wall damage; and physiologic alterations in blood coagulability. Probably venous retardation is the most important factor. Incipient thrombi tend to be initiated at the apices of the valve pockets or may originate in the cul de sacs formed by the valve pockets where the venous stasis is maximal¹².

Knisley and Warner¹⁴ have demonstrated blood sludging in special studies with the blood cells agglutinating into masses that settle to the lower side of the vessels and cement together, forming larger masses. Changes in blood convertin in certain experimental studies, in pregnancy, and in the early puerperium have been demonstrated¹⁵. A temporary rise in platelet adhesiveness also has been demonstrated postoperatively. Liberation of thromboplastic elements from gravid

uteri, traumatized tissues, or necrotic tumors may contribute to the hypercoagulable state. Clot formation then can be initiated and potentiated by a degree of venous stasis that would not of itself result in thrombus formation.

PATHOLOGY

Venous thrombosis usually originates in the plantar veins or branches of the anterior and posterior tibial vessels of the foot and low calf, at least partly due to endothelial anoxemia there^{10,16}. The older idea of separating thrombophlebitis and phlebothrombosis because of a supposed difference in their embolic potential appears not to be warranted^{12,17}. Pulmonary emboli may occur in either condition. Approximately 10 per cent of pulmonary emboli arise in veins with what is considered to be thrombophlebitis² and 80 per cent of emboli in noncardiac cases come from phlebothrombosis in the extremities. In cardiac cases about 25 per cent of pulmonary emboli come from intramural cardiac thrombi, chiefly right atrial¹. Arterial spasm may be so severe and profound in the presence of even unsuspected leg vein thrombosis as to lead to gangrene of the leg¹⁸. The leg veins probably initiate 90 per cent of the phlebothrombotic episodes¹⁹. Part of the disagreement in the literature on the primary venous thrombosis site undoubtedly arises because so few dissections are carried out below the inguinal ligaments.

The diseased or congested lung is much more likely to develop the full picture of pulmonary infarction after pulmonary embolism^{2,20}. The full clinical picture of pulmonary infarction follows embolism in 90 per cent of patients with heart disease but in 60 per cent of patients with other diseases, presumably because of congestion and the slowed pulmonary circulation in patients with heart disease⁸. Pulmonary infarction develops against a pleural surface, especially in the costophrenic angles. It is probable that there is recanalization of the embolus later in many cases. On gross examination of a lung with pulmonary infarction, small fat tabs on the pleura give a clew to healed or healing pulmonary infarcts. Pulmonary emboli may give rise to hemorrhagic pleural effusion or, still later, to old linear fibrotic shadows on chest X-rays. Pulmonary infarction may lead to pulmonary cavitation²¹. Patients diagnosed as primary pulmonary artery thrombosis may actually have pulmonary artery thrombosis superimposed upon a previous embolus^{17,22}.

Approximately a decade ago, Lushbaugh and Steiner found widespread embolism of small pulmonary arteries, arterioles, and capillaries by the particulate matter found in the amniotic fluid and meconium in cases of obstetrical shock and death²³.

SYMPTOMS AND SIGNS

Venous thrombosis, in its early stages, may give remarkably few symptoms. Later, pain in the affected parts, most commonly pain in the foot, behind the ankle, and in the calf, especially with weight bearing, will be the earliest complaints. Slight foot or ankle swelling may occur. In some cases, the associated severe arterial spasm may give rise to blanching and even coldness in the affected limb.

On examination, swelling and tenderness on lateral compression of the low calf can be elicited in early venous thrombosis. Somewhat later, limitation of dorsiflexion and aggravation of the patient's calf pain on dorsiflexion of the foot may be elicited. Shock, congestive failure, or unexplained fever may be the only indication of pulmonary infarction⁸. Chest pain and frank venous thrombosis occurred in only 20 per cent of cases in one recent study⁵. Probably 75 per cent of fatal pulmonary emboli give some premonitory signs and symptoms¹⁹.

With pulmonary embolism the obstruction between the two ventricles can produce three types of symptoms: insufficient cardiac output with peripheral circulatory failure and shock; signs and symptoms of pulmonary infarction; or signs of right ventricular failure (distended cervical neck veins and hepatomegaly)²⁴.

Insufficient Cardiac Output: Reduced cardiac output may be manifested by lowered blood pressure, clammy moist skin, increased pulse, decreased renal function, and elevation of the blood NPN. Syncope, often a presenting complaint for neurologic entities, may be due to the reduced left ventricular output with pulmonary infarction. Two reported cases had syncope without pain⁵.

Signs and Symptoms of Pulmonary Infarctions: An increasing number of studies show that hemoptysis is comparatively rare²⁵ with pulmonary infarction even though the latter probably is the commonest cause of hemoptysis in nontuberculous patients. Fever may occur in pulmonary infarction; pain usually is absent unless the

circulation is almost completely blocked. Symptoms and signs of pleurisy, consolidation, congestive failure, or plate-like areas of atelectasis at the lung bases may occur. With the increasing awareness of the many bizarre syndromes that may originate from pulmonary infarction it is clear that hemoptysis, pain, or significant X-ray changes may all be absent⁸.

The pain of pulmonary infarction may be pleurisy-like in character; substernal-like myocardial anoxia (when the embolism occurs in the larger branches of the pulmonary artery, this may be due to the associated diminished coronary artery flow); or pain from induced myocardial infarction, which may occur with pulmonary embolism even with normal coronary arteries.

In a recent article, Silverman²⁶ points out that pulmonary embolism, like many other types of cardiovascular disease, on careful bedside examination, will show important differentiating features, largely those of pulmonary hypertension. He refers especially to a heaving pulsation in the left lower parasternal area, systolic lifting in the second left intercostal space adjacent to the sternum, a palpable shock in the pulmonic area, and a conspicuous presystolic jugular pulsation. Localized chest wall tenderness, intense cyanosis, or hemoptysis favor pulmonary embolism.

Signs of Right Ventricular Failure: An accentuated pulmonic second sound, progressive dyspnea, and a full-blown picture of cor pulmonale may be the presenting symptoms of patients with pulmonary embolism⁸.

DIAGNOSIS

Pulmonary infarction may take bizarre patterns and mimic many other diseases. There are no absolute diagnostic criteria, so that an accumulation of circumstantial evidence must be relied upon to make the diagnosis. The classical clinical and laboratory features of pulmonary embolism seldom are encountered⁵.

Clinical Evidence: Important signs of venous thrombosis on physical examination are low calf or plantar tenderness, temperature difference in the two legs, a difference in the vein size of the two legs, and difference in the circumference of the calves⁸. An unexplained rise in the temperature and pulse may be due to an otherwise

asymptomatic venous thrombosis or pulmonary embolism.

X-ray: In 55 per cent of patients with pulmonary embolism, informed radiologists may suggest this possibility from X-ray studies^{5,20}. The most common X-ray findings are linear markings, not the typical wedge shadow. Approximately 24 to 36 hours must elapse, following pulmonary embolism, before X-rays will give their first evidences of pulmonary infarction². The X-ray pattern found in pulmonary embolism may be of several types¹⁵. With pulmonary infarction — a truncated cone with a base on one or more pleural surfaces (costal, diaphragmatic, mediastinal, or interlobar) may appear; without pulmonary infarction—congestive heart failure, pulmonary edema, pleural effusion, respiratory inhibition (with a high diaphragm and limited excursion, decreased distance from the dome of the diaphragm to the horizontal interlobar fissure, areas of atelectasis, often basal and plate-like), and pulmonary oligemia with increased translucency may be the picture.

Later, the chest X-ray picture of pulmonary hypertension may develop with dilatation and increased pulsation of the hilar arteries or chronic cor pulmonale. Here the heart resembles mitral stenosis without dilatation of the left atrium¹⁵.

Electrocardiogram: Electrocardiographic abnormalities may be detected in 70 per cent of patients who are adequately examined⁵. Israel and Goldstein⁵, in a group of 60 patients, found a picture of cor pulmonale in seven, transient positional changes in 28, and coronary insufficiency patterns in 18. Nevertheless, the electrocardiogram seldom is of great help because so many of the abnormalities noted are nonspecific. The electrocardiographic pattern of acute cor pulmonale was evident in 20 per cent of a large group studied by Carlotti and associates²⁷.

Serum Glutamic Oxalacetic Transaminase (SGOT): The value of SGOT determinations in the diagnosis of pulmonary embolism or in excluding similar clinical entities is still controversial^{28,29}. In one study, patients with pulmonary infarction showing SGOT elevations tended to have the peak rise between the third and sixth day, with an average level of 79, whereas in acute myocardial infarction the mean peak was 26 hours after the onset of the attack and the level was much higher²⁸. In animal studies this enzyme is highly concentrated in liver, kidney,

brain, and heart muscle as compared to skeletal muscle. SGOT also may be elevated in obstructive jaundice, pancreatitis, rheumatic myocarditis, renal infarction, hepatic necrosis, and in diseases of the musculoskeletal system^{5,30}. Most observers report normal SGOT values in patients with pulmonary infarction where other concomitant diseases do not exist.

That there is ample room for refinement of our diagnostic techniques in this disease is amply demonstrated by a study in which Miller and Berry³¹ found only 42 per cent of fatal cases of pulmonary infarction correctly diagnosed clinically. The typical picture of pulmonary infarction was seen in only 15 of their 104 cases. In 14, none of the so-called classic findings were present — pleural pain, hemoptysis, dyspnea, or friction rub. Tachycardia, mild dyspnea, and reduced blood pressure should be warnings of possible manifestations of pulmonary embolism and infarction. Pulmonary embolism must be differentiated from coronary artery disease, postoperative pneumonia, pulmonary neoplasms, and tuberculosis. It also may present as pleurisy with effusion, abscess, empyema, or pneumonia. It may simulate an acute surgical abdomen, hepatitis, or neurologic disease with syncope and vertigo⁵. Various forms of chronic myocarditis must be differentiated from repeated small pulmonary emboli⁸.

PROGNOSIS

The diagnosis of thrombophlebitis carries approximately a 5 per cent mortality¹⁰. Israel and Goldstein⁵ found that following pulmonary emboli, 77 per cent of their patients recovered.

PREVENTION

The incidence of venous thrombosis and consequent pulmonary embolism can be reduced by eliminating the causative factors¹⁵: Intimal damage — avoid subcutaneous or intravenous injections in the lower extremities, dilute hypertonic or irritating solutions; venous stasis — avoid immobilization, use elastic supports on the legs; increase blood coagulability — administer anticoagulants.

Generally applicable prophylactic measures are essential if we are to make any progress on this problem. The incidence of pulmonary embolism will be reduced if the preoperative preparation includes reduction in the obese patient, correction of varicose veins, medical supervision of cardiac

abnormalities (congestive failure and arrhythmia), and correction of anemia³². Phlebothrombosis can be anticipated in patients who are malnourished, with recent shock, acute coronary occlusion, mild congestive failure, lower abdominal surgery, the listless inactive patient, or those with anemia, carcinoma, or intra-abdominal inflammatory disease¹⁶. A program to prevent venous thrombosis should include¹⁰ proper positioning of the patient on the operating table, avoiding damage to veins or pressure on extremities, postoperative elevation at the foot of the bed, breathing and leg exercises every hour, early ambulation, and avoiding heel-less slippers.

Avoiding Immobilization: Lowe et al.,³² believe early ambulation is associated with a reduction in the incidence of thromboembolic disease from 53 to 18 per cent. Their studies further show that the incidence of pulmonary embolism is especially reduced with early ambulation. Many authors emphasize that early ambulation must be early, active, vigorous, repeated, and not "too little and too late" if it is to be effective in preventing venous thrombosis.

Elastic Stockings: Significant reduction of the incidence of pulmonary embolism has followed the routine application of elastic stockings for all immobilized patients^{33,34}. Two similar sized groups, one serving as controls and the other wearing stockings, demonstrate this well on the following table:

	Stockings	Controls
Fatal pulmonary embolism	0	4
Nonfatal pulmonary embolism	2	12

The authors believe every hospital patient may safely wear these elastic stockings, except those with severe disease of the legs such as ischemia, inflammation, or trauma. Elastic stockings are not a substitute for but an addition to other measures designed to prevent pulmonary embolism. Not all investigators using the elastic leg support as a routine preventive procedure have found them useful⁴⁰.

Vein Ligation: Ochsner³ urges prophylactic vein ligation on the cardiac side of the thrombus. Other authors feel bilateral superficial vein ligation should be used only if anticoagulant treatment is contraindicated or pulmonary emboli persist in the face of adequate anticoagulant therapy^{10,13,17}.

Anticoagulants: Many studies are reported in the literature advocating the use of anticoagulant drugs on a nearly routine basis in the early post-operative period for the prevention of venous thrombosis and pulmonary emboli^{1,16}. Other studies have reported success in reducing the incidence of pulmonary emboli—using continuous anticoagulant therapy in patients with rheumatic heart disease, auricular fibrillation, or severe chronic congestive failure¹. Both heparin and Dicumarol® have been recommended for these purposes³². Stinchfield's³⁵ studies suggest that anticoagulants impair bone healing. It probably is preferable to avoid routine anticoagulant administration in patients with renal insufficiency, brain or spinal cord surgery, blood dyscrasias, ulcerative lesions, nutritional deficiency, or hepatic disease³⁶. The value of routine postoperative anticoagulants in preventing pulmonary embolism in the especially predisposed was established more than ten years ago³⁶:

	Expected	Occurred
832 with abdominal hysterectomy		
— venous thrombosis or pulmonary embolism	33	3*
— fatal pulmonary embolism	6	0

(* minor venous thrombosis)

The Mayo Clinic⁴⁰ now uses prophylactic anticoagulant therapy for postoperative patients who have had venous thrombosis or pulmonary embolism previously and for most patients who have pelvic laparotomies. Donaldson and associates³⁷ use anticoagulants in individuals over 40 years of age who undergo major surgery and are bound to be debilitated for two days or more. The prothrombin determination is maintained depressed until the patient is active and has regained normal leg muscle tone. Younger people especially predisposed to phlebitis (obese, intestinal obstruction, distention, or particularly debilitating surgery) also are given Dicumarol. Other institutions report success with similar programs^{13,16}.

TREATMENT

Vein Ligation: Bilateral high ligation of the superficial femoral veins has been advocated for thrombosis of the leg veins. Because of swelling of the legs, varicose veins, ulceration, and cramping that may develop, it appears to be losing favor

gradually³⁷. Enthusiasm for ligating the vena cava also appears to be waning. The dyspnea and the postphlebotic syndrome that commonly develops with exercising the legs makes the value of the procedure dubious.

Anticoagulants: Refinements in the techniques of anticoagulant administration are making these preparations safer³⁸. In a recent study of 5,000 patients receiving anticoagulants there were no deaths due to anticoagulants. Long term anticoagulant therapy has been successfully used in rheumatic heart disease with embolic episodes, myocardial infarction, and in patients with recurrent thrombophlebitis with or without pulmonary emboli³⁹. The need for Dicumarol is decreased during an upper respiratory tract infection, diarrhea, intestinal sterilizing antibiotics, low food intake, or excess alcohol. Approximately 50 mg. per day will maintain most patients in the desirable 20 to 35 sec. prothrombin range. The value of this form of therapy in preventing thromboembolic episodes in patients with recurrent thrombophlebitis is seen in the following table⁵.

Patients	Without		With	
	Anticoagulants		Anticoagulants	
	Pt. Mo.	Episodes	Pt. Mo.	Episodes
24	2207	92*	896	7**

*Includes 63 episodes of thrombophlebitis and 20 of pulmonary embolism

**Thrombophlebitis in 7 patients

SUMMARY

Because pulmonary embolism permeates nearly all fields of clinical medicine it is appropriate to review some of the new considerations for the detection and management of this common disorder. Untreated, it tends to progress to chronic cor pulmonale, severe peripheral venous insufficiency, or even sudden death. It is estimated that in this country 30,000 people per year die from thromboembolism. Its prevention or effective treatment is of prime importance.

For decades, the triad of intimal damage, venous stasis, and increased blood coagulability has been incriminated as causing phlebothrombosis and pulmonary infarction. Of these, venous stasis probably is most important. Factors contributing to the hypercoagulable state, according to recent studies, include a temporary rise in the convertin complex, increased platelet adhesiveness, and possible liberation of thromboplastic elements from

a gravid uterus, traumatized tissues, or necrotic tumors.

In the absence of any positive tests for phlebothrombosis or pulmonary infarction, the diagnosis is best established with a careful history, a meticulous physical examination, and a high index of suspicion. All ancillary aids from the laboratory and X-ray departments constitute probable evidence that aids materially in establishing the diagnosis of pulmonary embolism and in excluding numerous similar clinical conditions. Clinical evidence, together with serial X-ray studies for the usual signs of pulmonary embolism (infarction, respiratory inhibition, basal atelectasis, pulmonary oligemia, dilatation of the hilar arteries, pleural effusion, or pulmonary edema) usually will permit a reliable differentiation from the various types of pneumonitis. In cases of suspected pulmonary infarction, where pneumonia cannot be excluded with reasonable certainty, it probably is preferable to include antibiotics in the treatment. Serial electrocardiograms and serial determinations of the serum glutamic oxalacetic acid transaminase level (SGOT), together with other available clinical information, usually permits the differentiation from myocardial infarction.

Early ambulation was associated with a reduction in the incidence of thromboembolic disease from 53 to 18 per cent in one carefully studied series. The routine use of low pressure elastic stockings in all immobilized patients appears to be effective in preventing venous thrombosis and pulmonary embolism. Efforts to avoid the immobilization that permits venous thrombosis to be initiated must be continued. A growing number of medical centers are using anticoagulants in a nearly routine fashion postoperatively in an effort to prevent venous thrombosis and possible pulmonary embolism. Many pulmonary emboli can be prevented by giving Dicumarol or similar drug to all patients with chronic, severe, congestive heart failure or to patients with rheumatic heart disease or auricular fibrillation who cannot be converted to a sinus rhythm.

Prompt and effective neutralization of the hypercoagulable state with anticoagulant therapy for at least three to six weeks is generally accepted as the preferable method of treating established venous thrombosis or pulmonary embolism. Rest and elevation of the legs remain important

older principles in the management of these diseases. Surgical vein ligation probably is best reserved for situations where anticoagulants are not feasible.

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Management of the Hypercholesterolemic Patient

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Hypercholesterolemia presents a problem to the investigator, to the patient, and to the clinician. The investigator realizes most acutely how incomplete is our knowledge of the relationships between blood lipids and atherosclerosis. He knows that caution must be exercised in interpreting experimental and epidemiological results. Most of all, he knows that any regimen for altering blood lipids must be evaluated in controlled studies to determine its ultimate effect on atherosclerosis. The patient reads in popular publications that coronary artery disease, the leading killer, is related to the level of cholesterol in the blood and that blood cholesterol is somehow related to the diet. Even the most carefully written articles are likely to be misunderstood by persons without medical training, particularly since such a complex subject does not lend itself to oversimplification. The clinician finds himself surrounded by a welter of inconclusive and sometimes contradictory evidence. On the other hand, he finds his patients eager for information and advice.

Let us focus for a moment on basic orientation of the clinician. First, he must distinguish whether a given study refers to blood lipids, atherosclerosis, or complications of atherosclerosis, such as myocardial infarction. Although these conditions may be related, they are not synonymous. Not every patient with atherosclerosis has abnormalities in blood lipids; and not every patient with arterial occlusion has atherosclerosis. Besides abnormalities in lipids, other factors in the production of atherosclerosis include clearing factors, structure of the arterial wall, respiration and lipogenesis in the arterial wall, arterial hypertension, and turbulence. All these factors are being studied, but their roles—

like those of the lipids—are incompletely understood. Atherosclerosis represents only one of several factors in arterial occlusions; of the others, blood coagulability is particularly important because thrombosis is nearly always the final event in arterial occlusion and may occur in the absence of atherosclerosis.

Cholesterol was early implicated in the etiology of atherosclerosis because of the ease of determining its serum concentration, its presence in plaques, and the occurrence of premature, severe atherosclerosis in several disorders characterized by hypercholesterolemia. The relationship between hypercholesterolemia and atherosclerosis is statistical, which means that although it applies to large groups, it does not necessarily apply to small groups or to the individual—something worth remembering when talking to the patient.

The lack of a test for uncomplicated atherosclerosis has been one of the foremost problems for clinician and investigator alike. At present, atherosclerosis cannot be detected until arterial occlusion occurs or until narrowing is sufficient to cause symptoms of ischemia such as angina pectoris or intermittent claudication. Until such a test is devised, we must attempt to evaluate the ultimate effect of treatment for hypercholesterolemia by detecting the thrombotic complications of atherosclerosis rather than by measuring degrees of atherosclerosis or its total extent. To date, attempts to improve on the predictive value of the blood cholesterol determination have centered around fractionation of lipoprotein cholesterol or total lipids, with particular attention to the beta fraction or low density lipoprotein fractions, which appear to be most guilty in the formation of atheromata. A committee of prominent investigators, designated to evaluate ultracentrifuge data in a co-operative study, reported last year that ultracentrifuge

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techniques did not improve on the accuracy of serum cholesterol determinations in predicting the probability of atherosclerosis¹. Whether the simpler electrophoretic determination or a chemical determination of the beta fraction will give information more useful than the total cholesterol level remains to be seen.

**DISCOVERY OF
HYPERCHOLESTEROLEMIC PATIENTS**

While awaiting more definite information, the clinician must decide what advice to give his patients right now. The most conservative approach would be to offer no treatment except prevention or elimination of obesity, the one measure on which everyone agrees. With such a viewpoint, there would be no need to determine serum cholesterol levels. At the other extreme some workers advise determining the serum cholesterol annually in all patients. Most would agree that the determination should be done in persons likely to have hypercholesterolemia. Several clues may lead to the discovery of this abnormality:

1. Conditions known to be associated with hypercholesterolemia (diabetes mellitus, hypothyroidism, nephrosis, bilateral oöphorectomy.)
2. Occurrence of coronary disease or arteriosclerosis obliterans in the patient at an early age.
3. Family history of coronary disease and/or premature arteriosclerosis obliterans.
4. Xanthelasmata.
5. Xanthoma tuberosum.
6. Xanthoma tendinosum.
7. Arcus senilis (premature).

Many hypercholesterolemic patients offer none of these clues and may be discovered by routine screening tests of the blood.

Our present view is that persons with any of these clues should be studied and that some form of treatment should be offered if hypercholesterolemia or elevation of the beta-lipoprotein cholesterol fraction is found. However, since there is no definite evidence that reduction in cholesterol levels is certain to lessen the chances of atherosclerosis or its complications, both physician and patient should understand that, regardless of the method of therapy, a clinical experiment is being conducted.

TYPES OF HYPERCHOLESTEROLEMIA

Although there has been much emphasis on exogenous factors, particularly diet, that influence cholesterol levels, the most important factor in determining the presence of hypercholesterolemia and its response to therapy is contained in the vague term, "the metabolic defect." As our understanding of hypercholesterolemia improves, it becomes apparent that it would be just as erroneous to lump together all forms of hypercholesterolemia as it would be to consider all forms of hyperglycemia as a single entity. Although the comparison is not exact, it is convenient to think of hypercholesterolemia as a metabolic disorder analogous to diabetes. The most common form of hypercholesterolemia—called essential, primary, or familial—is a genetically determined, nonsex-linked defect sometimes associated with the presence of xanthelasmata, xanthoma tuberosum, and/or xanthoma tendinosum.

Secondary hypercholesterolemia occurs in a number of dissimilar situations including diabetes mellitus, nephrosis, hypothyroidism, and following bilateral oöphorectomy. It also is found in the condition known as essential familial hyperlipemia, in which the total lipid content of the serum is greatly elevated, chiefly in the neutral fat and fatty acid fractions, with secondary elevation of the cholesterol level. The plasma is grossly milky. Cause and treatment of this disorder differ from all other forms of hypercholesterolemia and have been so well described that we might well digress to consider them at this time.

When a normal individual ingests a meal containing fat, the total lipids in the blood respond in the manner illustrated in Figure 1a, with a return to normal in a few hours. The curve in a person with essential hyperlipemia takes a much longer time to return to normal (Figure 1a). Consequently, his next meal comes along before the level has returned to normal, with a gradual step-wise increase until extremely high levels are constantly present (Figure 1b). The disorder can be treated effectively by a program consisting of a fat-free breakfast and noon meal, with an evening meal containing whatever amount of fat is desired. This program of spaced fat feeding usually results in a higher than average intake of fat, since patients tend

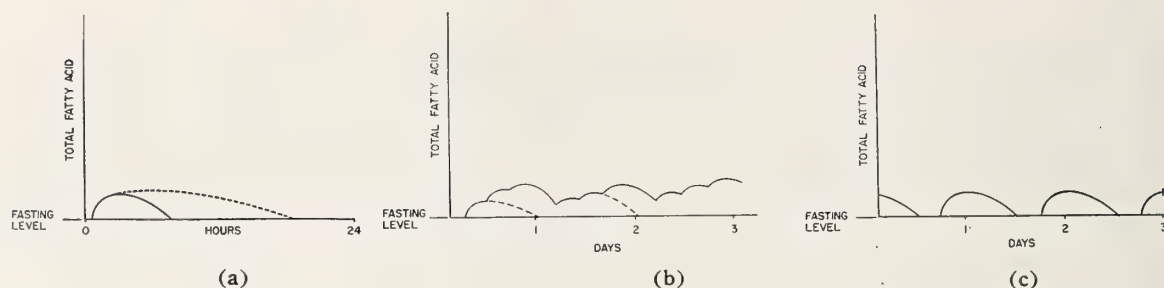


Figure 1.—Familial hyperlipemia: (a) The solid line indicates a usual fat tolerance test in a normal individual, while the broken line indicates the delayed removal of fat found present in a person with familial hyperlipemia; (b) Here, shown diagrammatically, is the slow build-up of fat in the blood stream due to the fact that the fasting level is not reached before the next fat meal is ingested. The broken lines indicate how the removal of the fat from the blood stream might continue, had not

another meal of fat been superimposed upon the elevated blood fat. What is shown here in exaggerated fashion continues over the years to build up hyperlipemia and hypercholesterolemia. (c) This shows, diagrammatically, when the spaced fat regimen is used, how the blood fats return to the fasting level before the next fat meal is ingested, even though the removal rate is prolonged.

Illustrations courtesy *Annals of Internal Medicine* (Wilkinson) 45:674-680 (October) 1956.

to binge in the evenings. But hyperlipemia is avoided because ample time is permitted for return to normal before fat again is ingested (1c). Mild cases can be treated effectively by elimination of fat at breakfast only. In this condition, hypercholesterolemia disappears when hyperlipemia is controlled.

The exact nature of the metabolic defect that causes hypercholesterolemia has not been delineated. It is clear, however, that the serum cholesterol level is almost independent of dietary cholesterol. The mechanism regulating this level lies somewhere in the synthesis of cholesterol in the liver, or in the balance between the intestinal absorption and excretion of exogenous and biliary cholesterol. It is likely that the major defect lies in synthesis of cholesterol from the acetate pool and that absorption is of secondary significance. The rate of conversion of cholesterol to bile acids and their subsequent excretion in the feces also may be of considerable importance. Even though incompletely understood, it is apparent that the metabolic defect is of major importance and other factors, notably the dietary intake, are less significant in determining hypercholesterolemia. To assign the major role to dietary fat is akin to considering diabetes mellitus a disease caused by excessive intake of carbohydrates.

DIETARY TREATMENT: GENERAL

Treatment that might be offered to patients with hypercholesterolemia can be divided into dietary and nondietary methods. As mentioned, if we decide on dietary treatment, we do so not

because diet causes hypercholesterolemia but because mild forms, like mild diabetes, sometimes can be controlled by diet. It is reasonably safe to say that in the human diet, only the fats and total calories are known to affect blood cholesterol levels. A review by Page et al.² offers an authoritative summary of the evidence regarding the role of dietary fat. In regard to the general population, they stated that the present evidence "does not suggest the desirability of any drastic dietary changes, specifically in the quantity or type of fat." On the other hand, they noted the deleterious effect of obesity (on arteriosclerosis, because of its increase in the work of the heart but not necessarily on hypercholesterolemia) and stated that "obesity is caused by consuming more energy than one expends, that dietary fats are the most concentrated source of energy, providing some 40 to 45 per cent of the daily caloric intake. Many should consume less calories, which — for most — means eating less fat. Diets providing 25 to 30 per cent of the calories from fat can still provide palatable meals for our accustomed tastes . . . The fat content should be sufficient only to meet caloric and essential fatty acid demands . . . These conclusions obviously apply to the general population and not to patients or to individuals with a strong family history of early death from cardiovascular disease, who are being observed with some regularity by their physicians. Here, the newer concepts of nutrition readily suggest various types of diet therapy that may prove useful to certain patients." This remark might

be construed as agreeing with the concept of offering therapy to any patient with hypercholesterolemia as a clinical experiment.

Restriction of dietary cholesterol, historically the first form of dietary treatment attempted, is ineffective, as already discussed. Restriction of total fat might be recommended because of the reported association of high fat intake with hypercholesterolemia. It is difficult, however, to disentangle fat content from other dietary and metabolic factors, including caloric balance, changes in body weight, and exercise. An undetermined number of the milder forms of hypercholesterolemia will be helped by sufficient restriction of fat. The critical point here, as in deciding on the clinical usefulness of each method of therapy, is in the degree of restriction required and the practicability of following the program indefinitely at home. No form of therapy is presently available that is effective unless employed continuously. Favorable results of short-term studies in a metabolic unit or in brief outpatient experiments do not necessarily indicate that a particular method is practical for clinical use.

UNSATURATED FATTY ACIDS

Many studies in the past few years have demonstrated that serum cholesterol can be reduced to some extent by substituting unsaturated vegetable fats for some of the saturated fats of the diet. The most successful programs have been the formula diets such as those used by Ahrens and associates and by Kinsell and associates. However, drinking three milk shakes daily instead of eating solid foods is not a way of life. Definite but less impressive results have been obtained when unsaturated fatty acids have been added to a more usual diet restricted in saturated fats. All of the reported studies covered relatively short periods of time. Persons with normal cholesterol levels and those with a slight metabolic defect (not synonymous with slight elevation of the serum level) may respond to dietary methods for reduction of circulating cholesterol; those with a more severe metabolic defect respond in a lesser degree or not at all. Once again, the main question is whether effective reduction of cholesterol levels can be achieved by a degree of dietary restriction that patients will follow indefinitely.

It seems clear that restriction of a given amount of saturated fat in the diet has about

twice as much cholesterol-lowering effect as the addition of the same amount of unsaturated fat. Attempts to reduce serum cholesterol by adding unsaturated vegetable fats to an unrestricted diet have been unsuccessful generally.

One other fact worth noting is that the effect of corn oil, which is inexpensive, is approximately the same as that of preparations of safflower oil, which costs considerably more. The several pharmaceutical houses producing safflower oil preparations have seen fit to imply by name, by quotation of suggestive but inconclusive evidence, or by advertising innuendo that their preparations have value in preventing atherosclerosis. There is no definite evidence that this is true.

OTHER DIETARY METHODS

Another dietary method that could prove to be of limited value, if the results of one study can be duplicated, consists of the addition of lecithin in large doses to a diet low in fat (36 grams of lecithin daily and a 25 gram fat diet). Lesser dietary restriction and smaller doses of lecithin previously had given less impressive results in other studies. A French study has shown reduction in cholesterol following administration of a product combining 5 amino acids. To my knowledge, these results have not been confirmed in this country.

NONDIETARY TREATMENT

Nondietary methods of reducing serum cholesterol levels include the use of desiccated thyroid or its analogues, sitosterols, chelating agents, magnesium compounds, estrogens, and nicotinic acid.

A. THYROID AND THYROID ANALOGUES

The use of desiccated thyroid or its analogues results in reduction of elevated cholesterol levels when hypothyroidism is the cause of hypercholesterolemia. These products usually are ineffective when hypothyroidism is not the cause.

B. SITOSTEROLS

Sitosterols, plant sterols somewhat similar in structure to cholesterol, are said to bind cholesterol in the intestinal tract when ingested with food, resulting in greater fecal excretion and reduced absorption, with reduction of serum cholesterol levels. Most workers who have studied beta sitosterol have found it ineffective in hypercholesterolemia. The commercial product is expensive, large quantities are required, and its

failure in repeated studies suggests that it should not have a prominent place in clinical programs.

C. CHELATING AGENTS AND MAGNESIUM COMPOUNDS

Neither chelating agents nor magnesium compounds have any clinical value at present, although isolated reports have assigned cholesterol-reducing properties to each.

D. ESTROGENS

Estrogens in large doses are effective in lowering cholesterol levels, with reduction of the beta fraction and increase of the alpha fraction. In men, painful mammary enlargement and loss of sexual function preclude widespread clinical use of preparations currently available. Some important clinical studies are in progress, however, evaluating the effect on atherosclerosis in patients treated for many years and compared with controls. It is possible that a suitable weak estrogen may be developed, with the lipid effects but without significant sexual effect, in which case this could become a practical method of treatment. Caution must be used in determining the effect on endocrine balance and reproductive function when even weak estrogens are administered for long periods. At present, it is desirable to administer estrogens in physiologic or larger doses to oöphorectomized young women, in whom hypercholesterolemia and atherosclerosis are likely to develop in severe degree without such therapy.

E. NICOTINIC ACID

Nicotinic acid in large doses has been found in a number of studies in the past three years to be effective in reducing serum cholesterol levels. The first long-term study was one I helped initiate and the latest results of which were reported by my former associates at the Mayo Clinic.³ Our study in Madison has yielded almost identical results. We now have 60 pa-

tients in the study and are continuing to expand it in order to insure long-term observation of a group large enough to assess the effect on the arteries. Our experience, in common with that of the Rochester group, the University of Saskatchewan group [where Altschul first suggested this method of treatment], and others, suggests that this is a safe and effective method of reducing serum cholesterol in the majority of hypercholesterolemic patients. Studies in cholesterol-fed rabbits by three independent groups have shown that nicotinic acid can prevent not only hypercholesterolemia but also aortic atherosclerosis. These results cannot be transferred to humans.

I shall summarize the results of our studies in 44 patients who have been followed for six to 24 months. In 18 who started in the second year of the study, lipoprotein cholesterol fractions have been determined as well as total cholesterol. Table 1 shows our usual dosage schedule. We start with 3 grams of nicotinic acid daily in divided doses after meals to minimize side effects. In general, the use of smaller doses has failed to give satisfactory results. If the serum cholesterol level is still above 250 mg% after 12 weeks at this level, the dose is increased progressively at 6-week intervals to 4.5 grams, 6 grams, 7.5 grams, and in a few cases to 9 grams, depending upon the response. To date we have found that doses higher than 6 grams a day do not improve on the effect of 6 grams in refractory cases. After 30 weeks, we substitute nicotinamide in equal dosage and have found that in every case, cholesterol levels have returned to the pretreatment control range. Twelve weeks later, nicotinic acid is resumed and the dose further individualized if necessary. In the second year, therapy is discontinued for four weeks to permit each patient again to serve as his own control. Cholesterol levels return to

Table 1. Dosage Schedule

NICOTINIC ACID

0-12 weeks — 3 gm. daily (divided doses, p.c.)

12-30 weeks — Same dose if cholesterol normal.

If above 250 mg. % increased (4.5 gm., 6.0 gm., 7.5 gm. daily) at 6-8 week intervals.

30-42 weeks — NICOTINAMIDE in equal dosage.

42-56 weeks — Resume nicotinic acid and adjust dose further if necessary (9.0 gm. in few).

56-60 weeks — No treatment

60 weeks on — Resume NICOTINIC ACID

Figure 2.—Illustration of reduction of blood cholesterol levels by administration of 3 gm. of nicotinic acid daily, return to elevated levels during the use of 1.5 gm. of nicotinic acid daily, reduction to normal levels when a daily dose of 3 gm. of nicotinic acid was resumed, return to elevated levels when nicotinamide was substituted, and reduction to normal levels when the use of nicotinic acid was again resumed.

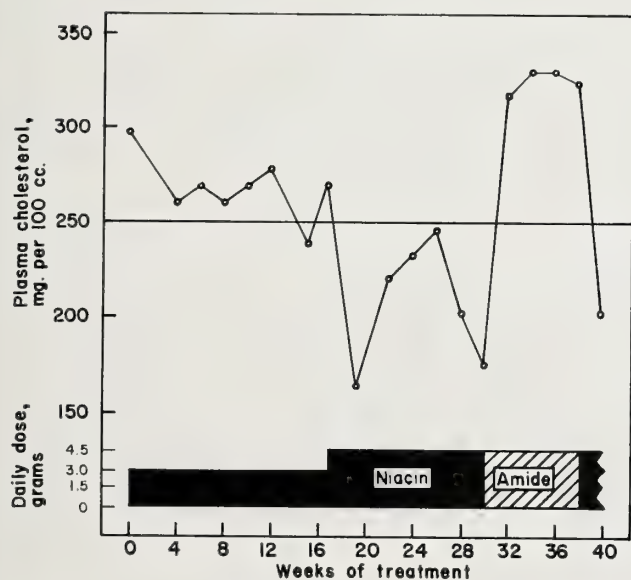
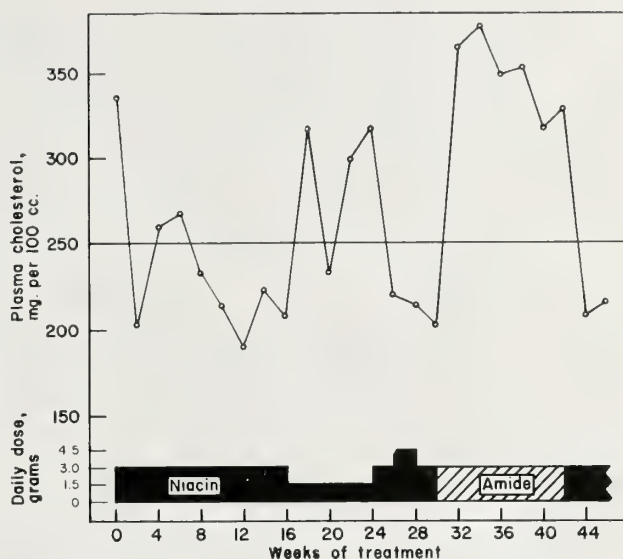


Figure 3.—Illustration of reduction of blood cholesterol levels to normal by administration of 4.5 gm. of nicotinic acid daily, return to elevated levels when nicotinamide was substituted, and reduction to normal levels when the use of nicotinic acid was resumed.

Illustrations courtesy J.A.M.A. 165: 234-238 (September 21) 1957.

pretreatment values within a few days or a week. Patients continue to eat their normal diets throughout the study.

Figure 2 shows the results in a typical case with good response to 3 grams daily. Figure 3 shows a good response to 4.5 grams daily. The average cholesterol levels in 44 patients in the various treatment periods are shown in Table 2. Table 3 shows the results in the lipoprotein fractions in Group 2 as well.

The flush and pruritus that occur after administration of nicotinic acid subside rapidly in the first few days or week of therapy. When flush persists past the first two weeks, it is mild and has not in any case required discontinuation

of therapy. No abnormalities in hematopoietic, cardiovascular, renal, or hepatic function have been found. Because of a study showing fatty changes in the livers of rats when an excess of nicotinamide was fed in the diet,⁴ we recently performed a battery of liver function tests on 19 patients and needle biopsies of the liver on 17 who had been in the study for longer than one year. No evidence of hepatic dysfunction or significant morphologic change was found.

The mechanism of action is not known, but we are studying differences between the action of nicotinic acid and nicotinamide in an effort to account for the effect of the former on cholesterol metabolism.

Table 2.
Average Serum Cholesterol Levels* Following Treatment with
Nicotinic Acid and Nicotinamide

	Pts.	Pre-Rx	0-12 wks. (N.A.)	12-30 wks. (N.A.)	30-42 wks. (amide)	42-56 wks. (N.A.)
Group 1	26	325	263	259	331	277
Group 2A	9	315	278	274	342	—
2B	9	301	262	248	—	—

*mg. per 100 cc.

CLINICAL TREATMENT

To summarize our present view of treatment, we feel that — at least, in younger persons with hypercholesterolemia — some form of therapy should be employed if the patient desires it and understands that he is taking part in a clinical experiment. The results should be evaluated by several control observations before treatment and repeated tests during treatment. If the patient is obese, restriction of fat and calories in the diet might be the first method tried. If this program fails to produce normal cholesterol levels (or normal beta lipoprotein cholesterol levels, if they are determined) or if the patient is not obese, he might be induced to try a program of restriction of saturated fats with the addition of unsaturated fats, or large doses of nicotinic acid can be used without change in the diet.

I do not wish to leave the impression that treatment of hypercholesterolemia is the same as treatment of the hypercholesterolemic patient. Frequently, knowledge of the presence of hypercholesterolemia produces undue anxiety, which usually can be allayed by a discussion presenting the available information in proper perspective. When clinical manifestations of atherosclerosis or its complications are present, they should be

treated on their own merits, as should such related disorders as arterial hypertension, diabetes, or hypothyroidism.

Finally, one of the great dangers facing us in this field is the possibility of widespread uncritical use of one or a combination of the available agents with the philosophy that "at least it can do no harm." This might result in over-the-counter sale of alleged preventives for atherosclerosis surpassing in magnitude the abuse of vitamin preparations that has made vitamins the greatest money-makers in the drug industry. Each of us has a part in striving to prevent such a situation.

SUMMARY

1. Because of statistical evidence incriminating hypercholesterolemia in atherogenesis, clinicians are justified in attempts to reduce elevated cholesterol levels provided both physician and patient understand they are conducting a clinical experiment, not using a method of established value for the prevention of atherosclerosis.

2. Several clinical clues are available to assist in detecting patients with hypercholesterolemia, but many cases are found by routine screening.

3. Of the numerous methods shown experi-

Table 3.
Average Beta- and Alpha₁-Lipoprotein Cholesterol Levels* Following Treatment with
Nicotinic Acid and Nicotinamide
(Group 2—18 patients)

		Pre-Rx	0-12 wks. (N.A.)	12-30 wks. (N.A.)	30-42 wks. (amide)
Group 2A (9 pt.)	Beta	204	159	155	228
	Alpha ₁	45	57	62	54
	B/A ₁	5.0	2.9	2.8	4.6
Group 2B (9 pts.)	Beta	196	152	151	—
	Alpha ₁	39	56	58	—
	B/A ₁	7.0	3.1	3.1	—

*mg. per 100 cc.

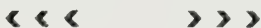
mentally to lower serum cholesterol, those most applicable clinically are restriction of dietary fat and calories, restriction of saturated fats with the addition of unsaturated fats, and the use of large doses of nicotinic acid without dietary restriction. Other chemotherapeutic agents undoubtedly will be developed as a result of intensive programs now in progress.

4. Until a test for the presence of uncomplicated atherosclerosis becomes available, demonstration of the ultimate value of any method of reducing blood cholesterol levels must await

long-term controlled studies in humans to show the comparative incidence of complications of atherosclerosis.

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Do you know your HQ (heart quotient)?

Do most people who have heart disease die suddenly?

Are there many kinds of heart disease?

Do you know what services there are in your community for people with heart disease?

A Heart Quiz containing 20 questions like these together with answers will be sent upon request. Write the Chicago Heart Association, 69 West Washington, or call Financial 6-4675.

Each year in Chicago more than 300 children die of congenital heart defects. To combat this situation, the Chicago Heart Association has initiated, with the United States Public Health Service, the biggest project ever undertaken in this field. The project is known as the Congenital Heart Institute which has the expressed co-operation of Chicago's five medical schools and the health agencies of city and state.

Parents — a reminder — it is particularly

important for your child to have a physical check-up at the beginning of the school year. Actually, a heart examination is part of every complete physical examination. Now, says the Chicago Heart Association, is a good time to make a date with your family physician for that examination.

Your heart is an efficient machine, more efficient and more enduring than any devised by man. In the course of a day it pumps 10 thousand quarts of blood into 12 thousand miles of arteries. If you would prove how much energy this involves, visit the heart exhibit of the Chicago Heart Associations at the Museum of Science and Industry in Jackson Park, and work the electric hand grip in time to your normal heart beat — 72 times a minute. See how tired you become. Then remember that your heart works this hard continuously from birth to death. *Do You Know Your HQ (Heart Quotient)? J. School Health Nov. 1957.*

Chemosurgery

in the Treatment of Cancer:

Its Scope and Indications for Its Use

HENRY A. SZUJEWSKI, M.D., CHICAGO

The problem of tumors of the skin, since the beginning of recorded medical history, has presented one of the greatest challenges to the ingenuity of the surgeon. The fundamental goal then, as now, is complete eradication of the growth. The limitations of surgery were considerable before anesthesia and blood replacement were known. The discovery of roentgen rays brought new hope for the cancer patient. For easily accessible cancers this form of therapy was thought by some to be the final answer. Advancements in anesthesia and blood replacement therapy allowed bolder surgical attacks on these accessible cancers.

Despite these advances, appreciable numbers of cancers of the skin and other accessible areas recurred following treatment. The commonest reason for these recurrences is that the original tumor was incompletely removed or destroyed. Moreover, the apparent recurrence may be a new primary tumor in the same or adjacent tissue, probably related to the same etiological factors as the previous primary tumor.

Incomplete destruction or removal of a cancer is due generally to one of two factors or a combination. First, cancers do not grow uniformly in all directions, but grow and extend in irregular, often bizarre patterns. The direction and magnitude of these extensions rarely are apparent to even the most experienced observer.

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The second major factor in recurrence is the unwillingness of the surgeon to sacrifice larger areas of what appear to be "normal" tissues. Especially is this true in lesions of the face where such excisions would result in difficult or impossible reconstructive surgery. Recurrences are not limited to surgical treatment alone. They are equally common following the various forms of radiations and for the same reasons.

There is evidence that the development of carcinoma is not dependent entirely upon changes in the epithelial cells. Local tissue inhibitory factors are capable of keeping malignant development in check. Removal of such an inhibitor may be the actual immediate cause of cancer⁵. This inhibitor is not a fixed property of the tissues but can be made to shift by experimental interference. It can sometimes be broken down locally by cautery, curetting, and other trauma of the tissues, in an area where there is a hyperplastic condition of the epithelium. Malignant changes can follow.

The variety of cell types and bizarre extensions of cancer of the skin probably depends upon the constancy of the inhibitor, i. e., its presence or absence and in what amounts. The degree of malignancy depends upon the capacity of the organism to produce the inhibitor. The behavior of epithelial cancer in all organs probably mirrors the behavior of cancer of the skin.

Whatever the exciting agent may be, the connective tissue apparently responds to the insult in a manner compatible with organismal control. It may be that this varied response on the part of the epithelial mesenchyme and endodermal structures is responsible for the numerous cell types and varied growth patterns observed in cancer. These different types of cancer re-



Figure 1. Case G.P. Preoperative photograph shows area of neoplasia, right cheek.

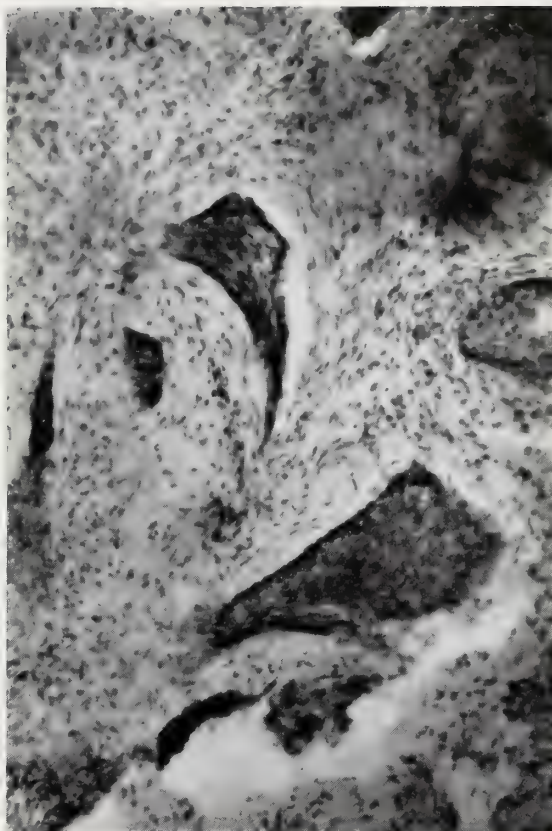


Figure 2. Photomicrograph of chemosurgical biopsy specimen obtained at first excision. Frozen technique used.

spond differently to treatment. Uniformity of response can be achieved only by a form of treatment that encompasses all types of growths, regardless of morphology. Chemosurgery is the only presently known form of treatment answering this need.

This method can be employed for skin cancers no matter what the cell type of the tumor may be. Repeated performance of the chemosurgical technique on cancer of the nose¹, ear², eyelids³, and face⁴ confirms this principle. The high percentage of cancer-free years enjoyed by patients who have been treated for recurrent cancer supports the effectiveness and thoroughness of the chemosurgical technique.

A case is presented to show the actual application of the technique in the treatment of a specific case:

Mr. G. P. (Figure 1), aged 47, complained of "something growing" on the right cheek. The growth was first noticed about five years ago when a pulling sensation was experienced. About a year ago his friends began to comment on the "thing" on his face. No treatments had been administered at area on the right side of the face, with slight bluish discoloration. The edge seemed glistening. There

was no bleeding. The rest of the physical examination was negative. The impression before biopsy was that the patient had a basal cell carcinoma that seemed quite large to palpation.

First Day: Dichloroacetic acid was applied superficially over the visible nodule. Whitening of the nodule and adjacent area indicated adequate penetration of the keratin and facilitated the passage of zinc chloride. Zinc chloride fixative was applied superficially over the area to the depth of about 2 mm. A dressing was applied carefully to exclude air.

Second Day: The dressing was removed. A layer of tissue from the treated area was excised, the incisions being made within the killed tumor tissue so that there was no pain on cutting and no bleeding. The first specimen thus removed was saved for microscopic examination. The microscopic diagnosis was basal cell carcinoma, invasive in character (Figure 2). Fixing agent was reapplied, and the treated area covered with a dressing.

Third Day: Dressing was removed and another layer of tissue dissected free. Microscopic examinations were made. The excised layer was divided into separate specimens and their edges marked for orientation with mercurochrome (solid lines), ordinary bluing (dotted lines), and black indigo ink

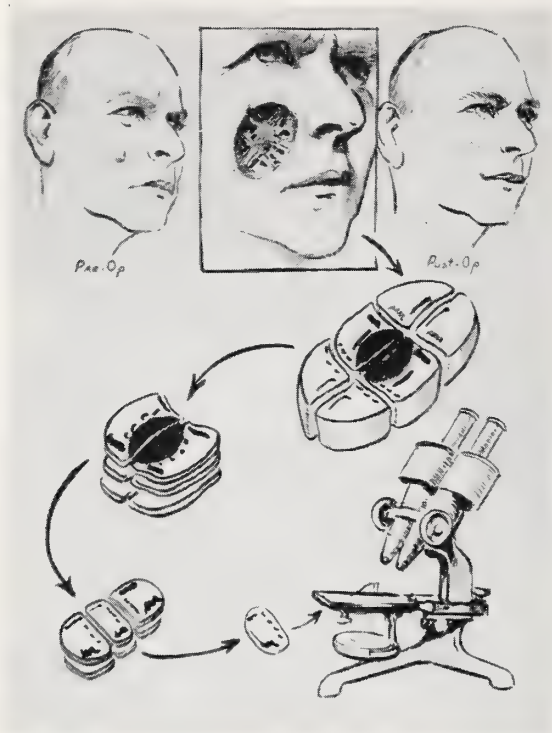


Figure 3. Diagram showing how tissue specimens are excised and marked for orientation.



Figure 4. Final layer has separated by itself and a granulating self-healing area now remains.

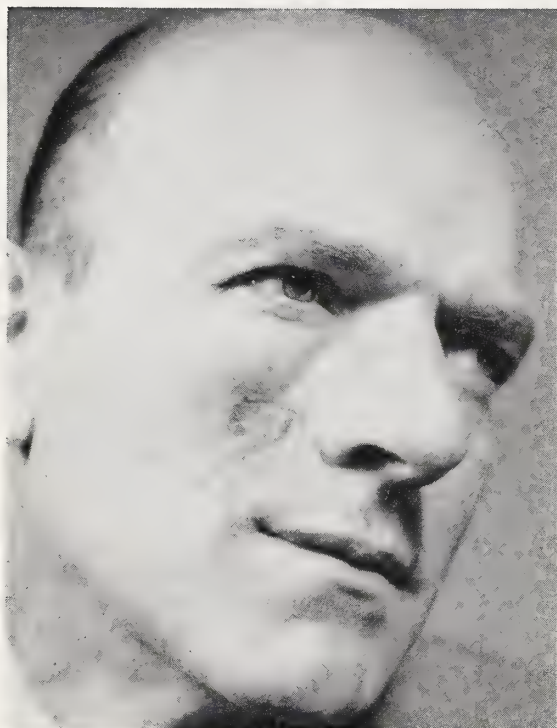


Figure 5. Wound now healed in less than three weeks. Minimal defect with small scar that will become less conspicuous with time.

(jagged lines) (Figure 3). Frozen sections were cut through the under surface of each specimen. Microscopic examinations revealed cancer in all specimens, as indicated on map. The fixing agent was applied once more to the corresponding areas of the lesion.

Fourth Day: Specimens were removed from the treated areas, and a few areas were found positive for cancer. These were treated again.

Fifth Day: Specimens were removed and re-examined. No evidence of cancer was found. Vaseline® dressing was applied.

Ninth Day: The final layer of fixed tissue separated itself and was removed (Figure 4). Vaseline dressing was applied. Within three weeks the lesion was healed (Figure 5).

The main advantage of this technique is that the thorough rigid microscopic control allows all tumor tissue to be removed while sacrificing minimal amounts of normal tissue. There are other important advantages. One of these arises from the gentle handling of the tumor and its bed which are inherent in this technique. There is no sudden disturbance of the entire mass of the tumor, as in curettage, electrocauterization, or surgical manipulation of a tumor. There is no interference with the balance between host resistance (connective tissue) and the tumor itself. Both are chemically fixed, thus bringing about

a state of complete stability of the tissues involved in the tumor area. Another advantage of chemosurgical method is the early availability of adequate material for biopsy. There is no substitute for a good biopsy. In chemosurgery there is no interruption of the treatment as may be the case in waiting for fixing, sectioning, and staining paraffin sections. Specimens are made immediately for microscopic examination and may be interpreted several minutes after the first excision. The microscopic examination of frozen sections extends tissue examination of epithelial and connective tissue elements because chemosurgical fixation of tissue does not greatly alter the noncellular or the cellular structure⁶. The dehydration and shrinkage involved in paraffin embedding tends to alter the noncellular tissues to such an extent that fibrin may be almost indistinguishable from fibrous connective tissue.

The great anatomical variation that exists in skin cancers is no contraindication for the use of this technique, whereas it may be with radiation therapy or surgery. So great is the variety of architecture in skin cancers that they should be dealt with separately in the organs in which they occur. Therapy should not be matter of speculation, but ought to be precise in that identification of the tumor and peritumor tissue should be thorough.

Diffuse infiltrating tumors, the cells of which are separated by dense connective tissue, are less likely to respond to X-ray or gamma rays than superficial solid type tumor without much connective tissue surrounding it. The morphologic characteristics of a tumor indicate the varying degree of organismal control more often than is suspected.

It is logical to assume that therapy to a tumor often interferes with organismal control so that areas of neoplasia actually become more active and virulent in their progressive destruction of the host. Excessive radiation, radical surgery, or any other therapeutic force capable of unbalancing the tumor host stability, often hastens the death of the patient rather than enhancing the control of the neoplastic process. It is in this class of skin tumors where the highest percentage of recurrence takes place³. The center of the tumor frequently is well condensed with scar tissue, giving the appearance of healing. This appearance is often found following X-ray ther-



Figure 6. The halo-like area to the right of the cancerous nodule is scar tissue that appears to be tumor-free, but actually tumor is present between the fibrous connective tissue and even under it in the subcutaneous tissue.



Figure 7. Entire area of scar harboring tumor cells now removed along with cancerous nodule which manifested itself at periphery of scar, where tissues were less dense.

apy or desiccation (Figure 6). Actually, the scar tissue harbors cancer that finally reappears when less dense tissue is invaded at the perimeter of the lesion (Figure 7).

The time of recurrence depends, it seems, on the density and extent of the scar tissue, and not on the viability of the malignant cells themselves. If cancer cells are caught within scar tissue and have to make their way through it, the time interval between remission and reappearance is longer. If cancer cells are only partially limited by scar and gain access to soft pliable tissues, recurrence appears more frequently and sooner.

The location of the skin tumor becomes of great importance when therapy is selected. A tumor near or on the nose, on the concha of the ear, margin of the eyelid, or tip of the nose becomes a technical problem when either the surgeon or the radiologist considers therapy. Because of the tendency to spare tissue and because of the hazard of radiation reaction on cartilage, tumors in these areas frequently are incompletely removed or treated. The architecture of the epithelial structures and the cementing tissues often is totally ignored. In addition, reactions in connective tissue overlying cartilage and bone differ, so far as ability to respond to varying degrees of injury as compared to connective tissue reaction in neck, abdomen, thigh, and buttocks.

The result is that there are frequent recurrences at or near these sites, and injuries to normal tissue result far more often than necessary. Skin folds or cartilage offer no difficulty when the chemosurgical technique is used. The resulting scars are minimal and grotesque defects, practically nonexistent. The surgery has been conservative in that tissue containing malignant cells is removed, and at the same time radical, since complete removal of tumor has been accomplished.

Experience seems to point to the following indications for use of the chemosurgical technique:

1. Primary accessible malignant tumors of the skin, except malignant melanoma which should be radically excised. Although Mohs⁷ reports successful treatment of melanoma by chemosurgery, he emphasizes that it is necessary to remove an additional zone of tissue after a melanoma-free level has been reached because

of the danger of satellite deposits in the surrounding lymphatics. If satellite lesions are present around a melanoma, it is quite certain that more distant metastases are about to occur or have already occurred. Radical excisional biopsy for a melanoma, in most cases, may cure a patient. Node dissection is not necessary when satellite lesions or suspicious nodes are not present. When metastases are present at the time of discovery and diagnosis, en bloc dissection and radical surgery certainly should be attempted. Since malignant melanoma does not present iceberg growth pattern but a centrifugal growth, radical surgery seems more logical and the attack becomes swifter in time than in the chemosurgical attack. Again, the melanomas vary widely in their relation to physiological processes rather than anatomical features.

2. After a single recurrence, chemosurgery should be instituted at once. A tumor that has been cauterized previously by an electric unit, radiated, or surgically treated and recurs, follows an extremely bizarre growth pattern after such treatment. The growth kinetics are altered. The spread of the tumor is no longer totally affected by organismal control but only partially so. Such a tumor is best treated by total identification under the microscope as well as totally removed at the same time. In some cases, where there is recurrence despite chemosurgical removal, subsequent changes in the tissue of a given area may or may not be related to the original cancer and cannot be assigned as failure of the method. This is especially noticeable in only a very limited number of cases that have been subjected to multiple methods of therapy, especially heavy radiation. There is the possibility that isolated outlying foci of cancer might result either from surgical or radiation treatment. Since these foci are disconnected from the main mass of cancer, they might be missed despite the microscopic control afforded by the chemosurgical technique. This is true also in cases where cancer is associated with such diseases as lupus erythematosus or psoriasis.

3. In external cancers of the nose and of the concha of the ear, minimal destruction of these organs is obtained, yet total removal of tumor is accomplished. (Figures 8, 9, 10, 11).

4. In cancer of the margin of the eyelids or on the eyelids themselves, the eye is not injured by the chemosurgical technique and maximal



Figure 8. Preoperative photograph showing surgical scar with reappearing tumor. Chemosurgery now used.



Figure 9. Photograph shows how extensive and deep the cancer actually invaded the nasal tissues.



Figures 10 and 11. Patient completely rehabilitated. Nasolabial full thickness pedicle graft. Re-

construction of Dr. Wayne B. Slaughter. Patient well now for five years plus.

preservation of noncancerous eyelid tissue is achieved. If the inner canthus of the eye or the tear duct itself is infiltrated with tumor, these areas are easily made free of tumor with the chemosurgical method.

5. In cancers that arise in previously radiated skin, it is obvious that more radiation is contraindicated. Since multiple foci of cancer have their greatest incidence in overirradiated skin, such skin may be removed and replaced by split thickness or pedicle graft. Such procedures are quite radical and cosmetic results are far from satisfactory. Multiple foci of cancer in such skin can be treated chemosurgically and the scars are less conspicuous. The rest of the skin of the face is benefited also because during the treatment there is an increase in the capillary blood flow due to the vasodilatation, which is part of the inflammatory reaction accompanying the treatment. Medical management following the removal of cancer in radiated skin is necessary and mandatory if further development of cancer is to be kept at a minimum or inhibited completely. A description of such management will be presented in a future report.

6. Cancers of the scalp, especially those having their origin in hair follicles can be efficiently eradicated with little loss of hair and with no injury to underlying bone. Skin graft and other reconstructive surgery rarely is needed following chemosurgery, except in very extensive lesions.

7. Cancers of the lip can easily be eradicated by chemosurgery. Large and matured cancers of the lip should be removed by radical surgery. When the classical V resection is employed, it is best to include most of the mucous membrane of the lip, especially when it is even slightly thickened, pale, or fissured. Cancers at the angle of the lip or at the mucocutaneous junction are best treated chemosurgically, especially if they are of the basal cell variety or spinobaso type. So-called leucoplakias that are fixed to the mucous membrane with fissure formation, usually are already early cancer. They should be removed in all cases and the base of the lesion thoroughly examined with the microscope until all evidence of neoplasia is removed.

8. Cancer of the penis can be treated adequately by chemosurgery if the tumor is confined to the glans penis.

9. Cancers that have their origin in chronic skin conditions, especially those that have had

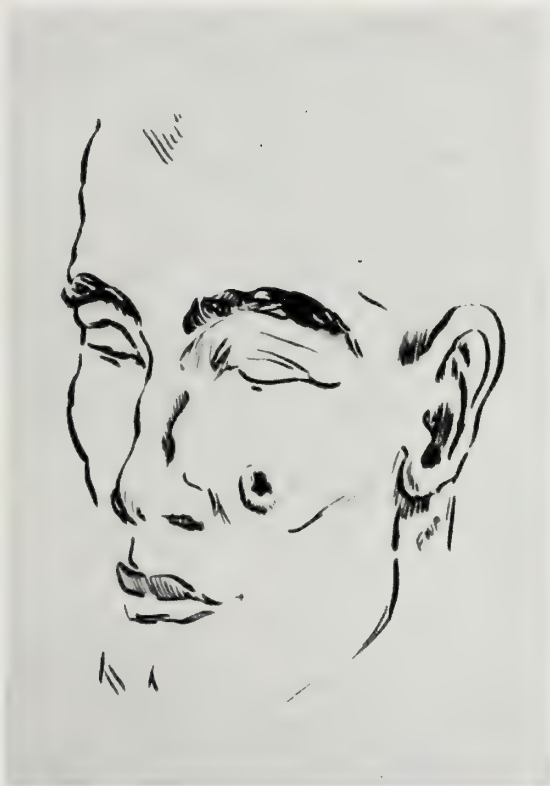
long previous treatment, are best treated chemosurgically. This includes lupus erythematosus, acrodermatitis, psoriasis, extensive burns with keloid formation, and xeroderma pigmentosa. They are closely allied to problems in which multiple cancers arise in radiated skin. In this category only are found the most difficult cases that do not respond completely to any form of treatment. It is felt that these cases are not cancer problems alone, but that other debilitating diseases are contributing to the cancer diathesis.

10. The chemosurgical technique also is useful in the treatment of other neoplastic and preneoplastic lesions of the face and skin, such as hemangiomas, nevi, keratoses, papillomas, xanthomas, and granulomas. Results in the treatment of these lesions are most satisfactory.

11. Chemosurgery also is indicated for many cancers in cavities accessible through normal, artificial, or pathologic openings by using modifications of the technique. This includes neoplasms of the lips, oral cavity, salivary glands, nasal cavities, accessory sinuses, larynx, vulva, vagina, penis, and anus. Local recurrences following mastectomy often can be treated successfully by this method. This list of indications is not necessarily complete. Other uses of the method are constantly being enlarged.

In all cases where lymphatic spread is detected, subsequent radical neck or regional node dissections must be performed. The chemosurgical technique for treating cancer is based on a thorough knowledge of surgical principles, staining of tissues, microscopic interpretation of tissue specimens, pathology in all its forms, and tissue reaction and repair. The success of the chemosurgical method depends on scrupulous attention to details. The technique is unexcelled for its reliability and accuracy, when properly applied. Its place in the treatment of accessible cancer is unique because of the microscopic guidance it offers.

Microscopic control is necessary because of the strong tendency for epitheliomas to exhibit irregular and often unsuspected outgrowths from the main cancerous mass and because of the great diversity in morphology. These bizarre outgrowths are more extensive in advanced and in recurrent cancers, but not infrequently they are observed in early lesions or untreated areas



Figures 12 and 13. Diagram demonstrating that epitheliomas of the skin exhibit irregular and often

unsuspected outgrowth from the main cancerous mass before or, more often, after ineffective therapy.

as well. (Figures 12 and 13). The use of the chemosurgical method is most helpful in the treatment of accessible cancer in the aged; the method entails practically no mortality. Although many cases were in an advanced age group, no death occurred during treatment.

The only disadvantage of the method is that specialized training and experience are required for the attainment of best results.

The following charts show the end results of the chemosurgical treatment of basal cell carcinoma and squamous cell carcinoma of the skin of the face after a period of five years and over.

CHART 1.

This series includes all patients with histologically proved basal cell carcinoma, both early and advanced, not previously treated, who were treated chemosurgically during the five year period ending July, 1957.

Total number of cases: 38

Indeterminate group, total number: 2

Patients dead from other causes without recurrence: 1

Patients lost from observation without recurrence: 1

Determinate group, total number 36

Unsuccessful results: 0

Patients dead, cancer present at death: 0

Patients lost from observation with cancer: 0

Patients living with cancer: 0

Successful results, patients free from cancer five years or more: 36

Five year rate of cure: 100%

Basal Cell Carcinoma

		five year cure
Nose	10	100%
Face (cheeks)	19	100%
Forehead	2	100%
Concha ear	2	100%
Skin of back	2	100%
Mucocutaneous junction	1	100%

These cases were all of the infiltrating type. The size of the lesion varied from 1 to 10 cm. The first treatment in all cases was chemosur-

gery and all were consecutive cases. They are all still being closely followed.

CHART 2.

This series includes all patients with histologically proved recurrent basal cell carcinoma, whether early or advanced, who were seen in the seven years ending July, 1957. The results of chemosurgical treatment are tabulated below.
Total number of cases: 20

Indeterminate group, total number: 1
Patients dead from other causes without recurrence: 1
Patients lost from observations without recurrence: 0

Determinate group, total number: 19
Unsuccessful results: 1
Patients dead, cancer present at death: 0
Patients lost from observation with cancer: 0
Patients living with cancer: 1
Successful results, patients free from cancer five years or more: 18
Five year rate of cure $(18-19) \times 100\%$ equals 94.7%

The adverse effects of previous treatment on prognosis are indicated by the rate of cure, 94.7% (Mohs 95%) for these patients with recurrent lesions, as compared to the rate of 100% for those who had not received previous treatment.

The fact that 94.7% of all recurrent lesions responded to chemosurgical treatment indicates the effectiveness of the method. Most of these cases were far advanced and many had been operated or heavily irradiated or both. In this series all cases are still alive except the one in the indeterminate group, and all are still being followed.

CHART 3.

This series includes all patients with histologically proved squamous cell carcinoma, whether early or advanced, primary or recurrent, with or without metastases, who were treated chemosurgically during a seven year period ending July, 1957.

Total number of cases: 11
Indeterminate group, total number: 0
Patients dead from other causes without recurrence: 1
Patients lost from observation without recurrence: 0

Determinate group, total number: 11
Unsuccessful results: 0
Patients dead, cancer present at death: 0
Patients lost from observation with cancer: 0
Patients living with cancer, 0
Successful results, patients free from cancer five years or more: 11
Five year rate of cure: 11 or 100%

The method for reporting results is the one used by Dr. F. Mohs in his new book, "Chemosurgery and Cancer, Gangrene and Infection," Charles C. Thomas, Springfield, Illinois, 1956.

Squamous Cell Carcinoma

		five year survival
Nose	5	100%
Face (cheek)	2	100%
Upper lip	2	100%
Skin (neck)	2	100%

The grading of these cancers (Broder's) ranged from grade I and grade IV.

SUMMARY

A discussion of the underlying principles affecting the growth of cancer of the skin is presented as well as the necessity for a thorough microscopic eradication of the skin cancer. The scope and indications for the use of the chemosurgical method are described. Experience with the method gives an unequaled appreciation of its effectiveness. By seeing the method in use, its thorough and complete attack on cancer can be fully appreciated. It is a logical method since it does not interfere in any way with effort by the host to combat the tumor. Chemical fixation of a tumor in situ and its removal results in a truly dramatic healing response. Detection and treatment of early cancer by this method is so easily achieved it is truly one of the most effective methods in the control of cancer.

55 E. Washington St.

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Calcific Aortic Stenosis: Diagnostic Considerations

DONALD C. EDGREN, M.D., ROCKFORD

BECAUSE of recent advances in the surgical treatment of valvular heart disease, it is imperative that all cardiac murmurs be evaluated correctly. This paper is being presented to point out the difficulties in the diagnosis of aortic stenosis and to offer suggestions to aid in its diagnosis.

Aortic stenosis as a cause of cardiac disease is encountered frequently and is becoming more and more important as the age of our population increases. In this paper we are interested in the calcific form; the question of whether or not it is related to rheumatic fever is not within its scope. In the past few years there have been important advances in the surgery of stenotic lesions of the aortic valve. Surgery is not indicated for all, but every attempt to diagnose the condition should be made so that thought can be given to surgical therapy. With the advances in technique and anesthesia, age is no longer the deterrent to surgery it once was. Witness the recent elective gall bladder surgery on Herbert Hoover when he was 83 years old.

Formerly, various criteria for diagnosing aortic stenosis were taught in our medical schools, hospitals, and textbooks. Now we are finding that rigidity in the application of these criteria may cause the diagnosis to be missed.

Because of two recent instances of incorrect diagnosis the records of Rockford Memorial Hospital were reviewed. Of 23 patients with an autopsy diagnosis of severe to moderate aortic stenosis, the diagnosis was missed clinically in 11 patients. There are many articles in the literature on aortic stenosis but, because of the large number of patients and the thoroughness of the studies, two were selected for discussion. The first was published in 1948¹ and the second in 1954². In the first series the correct diagnosis was made in only 41 per cent* of the 107 patients. In the second study, the correct diagnosis was made in only 50 out of 100 patients. Many of these patients could have been helped by surgery. This article is being written in an attempt to increase the accuracy of the diagnosis so that more patients can be offered help.

Classically, the patient with aortic stenosis presents with a loud rough aortic systolic murmur, an aortic systolic thrill, an absent or faint second aortic heart sound, a characteristic small delayed pulse, and a low pulse pressure. In our small series at Rockford Memorial Hospital, and in the two previously mentioned larger series, the above complete findings were present in a definite minority. Reliance on these signs was more of a hindrance than a help in diagnosis

Note: The article stated that the correct diagnosis was made in only 26 per cent, but 15 per cent had a diagnosis of combined valvular disease.

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because of their rareness. When present they are significant because they lend confirmation. In these series the "typical" level of the blood pressure and the type of pulse were so unusual that they should be disregarded completely as diagnostic signs. The aortic second sound was decreased or absent, or less than the pulmonic second sound in only 50 per cent of the patients. Even with severe aortic stenosis, with just a small blood flow, the aortic second sound may be loud and booming. In some of these patients, the aortic second sound may be transmitted from the pulmonic area. It is suggested that the aortic second sound may be evaluated more completely by listening for it in the first right intercostal space near the sternum. Even the incidence of a basal systolic thrill was low, being found in only 21 per cent¹ and 45 per cent² of the cases. In the group with the larger percentage, the thrill was searched for with the patient leaning forward and the breath held in deep expiration.

Of the classical criteria the loud rough systolic aortic murmur is the most reliable; but even this is not too reliable. In about 10 per cent of the patients no murmur will be heard because of loud respirations or pulmonary emphysema. In the remainder only about 70 per cent will have a rough aortic systolic murmur. So, even when there is every opportunity to hear the murmur, it will only be heard in about 70 per cent of the patients.

How is the diagnosis made in the remaining patients? This group does have a finding that is of much value. Those without a basilar systolic murmur will have a characteristic apical murmur 70 per cent of the time. The murmur frequently is described as harsh, squeaking, or musical. When this systolic murmur is heard at the apex, careful search should be made for a basilar systolic murmur which, when found, often is soft, yet harsh.

From the above we can see that the most reliable of the criteria for the diagnosis of aortic stenosis is a harsh or musical systolic murmur heard either at the base or apex of the heart. A harsh systolic murmur also is heard with numerous other conditions which should be considered in the differential diagnosis. Probably the most common cause of a harsh aortic systolic murmur—other than aortic stenosis—is dilatation of the aorta due to arteriosclerosis. Here the murmur is less harsh, the aortic dilatation

is seen radiographically, and there is no calcification of the aortic valves.

Another condition commonly mistaken for aortic stenosis is mitral insufficiency. The murmur of mitral insufficiency may be transmitted to the aortic area and into the neck. But if it is transmitted this widely and loudly, it is easily heard over the left posterior lung base, and very indistinctly, over the right anterior chest; whereas the murmur of aortic stenosis (even if loudest at the apex) is not heard at the left lung base. Also, uncomplicated mitral insufficiency is rare after age 50 and does not show aortic valve calcification.

In the age group in which aortic stenosis is most commonly found, another condition frequently is present: calcified mitral annulus. Here again we have a harsh systolic murmur usually heard best at the apex. The transmission of the murmur usually follows that of mitral insufficiency, but the most important differential point is the timing of the murmur. It does not immediately follow the first heart sound and usually is described as mid-systolic. It begins in the middle of systole and builds up until it ends with the second heart sound or soon after. The murmur of aortic stenosis begins soon after the first heart sound, builds up into a crescendo, followed by a decrescendo, giving rise to a characteristic diamond-shaped murmur. In calcification of the mitral annulus the calcification usually is seen fluoroscopically as a dense, ringlike area of calcification with little pulsation.

Another condition sometimes diagnosed instead of aortic stenosis is aortic regurgitation. This is understandable because of the frequent coexistence of an aortic diastolic murmur and high pulse pressure even with severe aortic stenosis. Since the two lesions may coexist, accurate clinical judgment is needed. Frequently the diagnosis as to the important lesion can be made only by cardiac catheterization with measurement of the pressure gradient between the left ventricle and the aorta. Congenital cardiac lesions, thoracic tumors, and aortic aneurysms usually can be easily differentiated by the age of the patient and by X-ray examination of the chest.

The positive aspects of diagnosis will be emphasized now. If we make the same effort to diagnose aortic stenosis as we do to diagnose mitral stenosis, I believe our diagnostic accuracy will

be almost as good. Our efforts will not receive as great a reward as with mitral stenosis since many patients with aortic stenosis are aged and have other complicating diseases; but, even if we can help one in 10 our efforts will be rewarded.

On examining the patient with suspected aortic stenosis (and everyone with heart disease should be a suspect) we should look for the "classical" signs of aortic stenosis such as a systolic thrill and low pulse pressure. But we must not be disappointed not to find them. We ought to look mainly for a harsh systolic murmur, loudest in the aortic area, and transmitted to the neck and right shoulder. At times the murmur will be loudest at the apex, but it is not transmitted to the left lung base posteriorly. The timing and tonal characteristics of the murmur are important whether heard at the apex or over the base of the heart. The murmur begins at, or soon after, the first heart sound, builds up in crescendo fashion, and abates as a decrescendo giving rise to a diamond-shaped murmur. The murmur is harsh, or squeaking, or high-pitched, or musical. When thought to be heard exclusively at the apex, careful examination of the patient at the base of the heart frequently will result in the hearing of a soft but harsh aortic systolic murmur.

If aortic stenosis is suspected the patient should be fluoroscoped for calcification of the aortic valve^{3,4,5}. In the right anterior oblique position, the aortic valve lies somewhat above and anterior to the mitral valve. In the left anterior oblique position, the aortic valve lies in the middle third of the cardiac shadow while the mitral valve is in the posterior third. The calcific valves appear as dense nodular pulsating shadows that appear to dance in a jerky fashion downward and apical in systole, and upward and toward the midline in diastole.

If aortic stenosis is suspected, and surgery to the valve is being considered, cardiac catheterization should be undertaken to ascertain the differential pressure between the left ventricle and aorta. This is done mainly to confirm the diagnosis in doubtful cases, but should be done also in patients with a diagnosis of aortic stenosis in whom surgery is contemplated. This is true since some patients with aortic stenosis will have no functional disability from it and another cause will be found for the cardiac disability.

SUMMARY

By reliance on the "classical" findings of aortic stenosis the diagnosis will be missed about 50 per cent of the time.

The diagnosis of aortic stenosis can best be made by paying close attention to a rough basilar or apical systolic murmur: its timing, tonal characteristics, and radiation to the neck and right shoulder.

Confirmation of the diagnosis frequently can be made through cardiac fluoroscopy, looking for calcification of the aortic valve.

In doubtful cases and those in whom surgery is contemplated, cardiac catheterization should be carried out.

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The Importance of Dietary Sodium in the Etiology of Essential Hypertension

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Is excessive dietary sodium of *primary* etiologic importance in the development of essential hypertension, is it only a *secondary* permissive factor, or is it of no consequence?

Clinical Evidence For Its Importance

From the clinical standpoint, the correlation between the ingestion of a diet high in sodium chloride and the presence of essential hypertension has been extensively studied by Dahl.¹ This investigator presents evidence supporting the hypothesis that an elevated sodium intake is the primary etiologic factor in the development of essential hypertension. In a classification based on the individual's stated use of salt, he found that those on a low intake had significantly less hypertension than did those on a high salt intake. Dahl considers the eight to 10 grams of salt commonly ingested daily in this country excessive and suggests that persons who do not have a history of hypertension in the family may take up to five grams a day. Those with a family history of high blood pressure should limit the intake to less than one gram a day, to decrease the chance of developing hypertension. Other investigators who carried out similar surveys on various groups as to the amount of salt ingested and the level of the blood pressure substantiate Dahl's findings.²

Further clinical evidence of the importance of the level of sodium in the diet is provided by the fact that restriction of sodium intake in patients with essential hypertension results in alleviation of hypertension in some. That all such patients do not respond to this form of treatment may be due to the ability of the kid-

neys to reduce the output of sodium to less than the dietary intake. Chlorothiazide, a potent oral natriuretic agent, has provided a means for overcoming this renal conservation of sodium. The antihypertensive effect of this drug, which is particularly evident when it is used in conjunction with other forms of treatment, also emphasizes the benefit derived from eliminating sodium from the body.

Experimental Evidence For Its Importance

The importance of excessive sodium ingestion in contributing to elevation of blood pressure is established in some forms of experimental hypertension, such as those involving partial ablation of the adrenal glands or the administration of salt-retaining adrenal steroids. There also are several studies showing that sodium chloride alone, when given in large doses, causes hypertension in some animals. The most impressive experimental demonstration of the relationship between salt intake and hypertension, and one which provides in part the laboratory counterpart of Dahl's clinical study, is that carried out by Meneely.³ He has shown that groups of rats fed diets containing various quantities of sodium chloride, ranging from 2.8 to 9.8 per cent, after several months, have blood pressure levels that are progressively elevated in direct relationship to the amount of salt ingested.

Just as is the case clinically, the converse of an excessive sodium intake causing hypertension is seen in the field of experimental hypertension. In some hypertensive animals, rigid sodium restriction or the removal of sodium from the body will lower blood pressure.

Clinical Evidence Against Its Importance

Not all surveys have demonstrated a correlation between the stated ingestion of salt and the blood pressure level. One study of a group of 3,000 individuals showed no relationship.⁴ Some have felt that the selection of special groups for such surveys leads to bias of the data.

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While the Nutrition Committee of the Chicago Heart Association is sponsoring this article, the opinions expressed are those of the authors and do not necessarily represent the official view of that committee.

Doubt also has been expressed as to the reliability of the dietary history in respect to the exact amount of salt ingested. Studies of 24-hour urine sodium excretions of subjects on self-selected diets have shown extreme variability in the amount excreted daily.

Other clinical observations likewise minimize the primary role of sodium in the etiology of essential hypertension. Only one-fourth or one-third of all hypertensive patients treated by a low sodium diet show a fall in blood pressure. Furthermore, such subjects after a period of time on sodium restriction, may show no correlation between any change in blood pressure and the change in total exchangeable sodium.

Experimental Evidence Against Its Importance

At the experimental level it requires gross overfeeding of salt to produce hypertension. The amount necessary is many times that which humans would ingest ordinarily. Even with such large quantities, the hypertension that results occurs only inconstantly and usually with evidence of concomitant renal damage. The latter may be an important etiologic factor.

Further doubt concerning the primary role of sodium in the production of experimental hypertension is raised by the following facts: 1) The administration of the various adrenal cortical hormones does not result in hypertension in proportion to the sodium retaining abilities of these substances. 2) Potassium, when added to the diet, minimizes the effect of excessive sodium. 3) In the complete absence of potassium, additional sodium in the diet acts as a hypotensive agent.

A Rationalization Of These Differences

The data do not provide a definite answer to

the question of the exact etiologic importance of excessive dietary sodium in the development of essential hypertension. However, there is overwhelming evidence that the role of sodium is extremely important. The arterial wall of the hypertensive man or animal contains more than the normal content of sodium.⁵ A change in the ratio of sodium within arterial smooth muscle cells to that outside of the cells, results in an alteration in both the muscle tone and its responsiveness to vasopressor agents. Similarly, the ratio of the potassium concentration inside to that outside of these cells may be of equal if not greater importance. The proper distribution ratios of these cations are crucial for the optimal functioning of cells.

On the basis of all this information, it may be stated unequivocally that sodium plays a prominent role as a *permissive* factor in the development and persistence of hypertension. However, present knowledge strongly suggests that excessive dietary sodium is not of primary *etiologic* importance in the development of essential hypertension.

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Spontaneous Hemorrhage into the Rectus Muscle

P. C. RUMORE, M.D., EFFINGHAM AND J. P. MIRANTI, M.D., GREENUP

SPONTANEOUS hemorrhage into the rectus abdominis sheath is a clinical entity seldom considered when the physician is faced with the problem of an acute surgical abdomen. When such hemorrhage occurs, it is experienced by the patient as localized pain in the region of the rupture in the epigastric artery, which may occur anywhere along the length of the rectus abdominis muscle. Usually a mass is not palpable until the volume of extravasated blood is so large as to perfuse the adjacent muscle with blood. By the time this mass has developed, extravasation of blood has progressed by dissection down to the level of the semilunar fold of Douglas, thereby inaugurating peritoneal irritation through the thin transversalis fascia and peritoneum. If dissection does not extend to the level of the semilunar fold or beyond this area inferiorly, it is not likely to be accompanied by peritoneal irritation and is not likely to mimic clinically an acute surgical abdomen. Such cases probably go unrecognized by the clinician.

Anatomically, this area is subject to considerable stretching and contraction of the rectus muscle as well as sudden acute strains as in coughing and sneezing. This may lead to tears in the muscle fibers or their nutrient vessels and the formation of a hemorrhaging pool of blood which must follow the confines of the rectus sheath.

The etiology of this condition has been classified as traumatic and nontraumatic. Traumatic causes include those resulting from direct and indirect force. Nontraumatic causes include (1) weakening of muscles due to (a) serious infections such as tetanus, typhoid, or influenza; (b) pregnancy, labor, and puerperium. (2) Severe arteriosclerosis, especially in elder persons. The case to be discussed falls into this latter category. Of interest are reports of this condition in young men during the influenza epidemic of 1917 and 1918.

Pathology consists of either a rupture of the muscle fibers with ensuing hemorrhage, or the rupture of one of the epigastric vessels or branches. This leads to infiltration of the muscle mass with blood, causing pain and spasticity that is hard to distinguish from the acute abdomen. There often is splinting of the muscles on the side of the hemorrhage that may be confused with the boardlike abdomen found in certain acute conditions. If hemorrhage increases, a mass appears which often is difficult to distinguish from an intraabdominal mass. In some cases, as in the one to be reported here, the mass may increase in size rapidly with a concurrent increase in area of pain, but there is no radiation of pain beyond the extent of the mass.

The authors feel that the syndrome of a rapidly enlarging painful mass in the abdominal wall

in the region of the rectus sheath is diagnostic of hemorrhage in the rectus sheath. A review of the literature concerning this entity reveals some illuminating points in prognosis and treatment. Reported cases have been treated both conservatively and by surgery with successes and failures reported in both instances. In a review of 107 cases, mortality of 7.5 per cent was reported³. This series included cases from the age of 3 months to 90 years, but other conditions may easily have led to this high mortality rate, since the average age of death was 60 years.

In the surgical treatment of this condition, preoperative diagnosis has ranged from acute empyema of the gall bladder (such as in our case) to any other intraabdominal emergency. At times the peritoneal cavity has been entered, complete examination performed, and then attention has been turned to the abdominal wall revealing the hematoma⁴. Therefore, incision over the mass at the time of surgery is strongly recommended.

The case presented in this report is that of a 73 year old white female, para 8, gravida 8, who is a hypertensive cardiovascular problem and also severely kyphotic due to ankylosing spondylitis. On the morning that she became acutely ill with vague abdominal distress that soon became severe enough to warrant notification of the attending physician, her chronic disease problem was static. She was on a management of hypotensive and cardiac drugs, Raudixin® and Diamox®, respectively, and was also on supplemental vitamins (Theragran-M®).

Just as this patient decided to get out of bed after awakening, pain started in the right upper quadrant over the gall bladder area. It was constant, severe, and aggravated by any attempted motion. Pain did not radiate but the painful area increased in size, extending from the right upper quadrant to the region of the umbilicus and inferiorly in a period of some two hours. Once it had reached two finger breadths below the umbilicus, pain became more severe and the patient resisted emphatically any attempt to change her position.

The original physical examination done approximately two hours after the onset of the acute abdominal episode revealed a blood pressure of 160/100, pulse of 90, and respirations of 16 per minute. Temperature was normal. She had compensated arteriosclerotic heart disease

and kyphosis due to the long standing spondylitis. Generalized right sided muscle rigidity was noted with rebound to the right para-umbilical region. The examiner had the impression of an ill defined mass extending subcostally down to the umbilicus on the right. Rectal and vaginal examination were not helpful in deciding the nature of the acute episode.

In another hour, or by the time hospital admission had been accomplished, the mass had enlarged to two fingers breadths below the umbilicus and pain had increased in severity. The mass remained ill defined because of difficulty of accurate palpation caused by distress. The area of pain increased correspondingly with enlargement of the mass.

Laboratory work on admission to the hospital revealed a hemoglobin of 16 gm. or 100%, hematocrit 50, leucocyte count was 9,100 with 79% segs, 7% band, and 14% lymphocytes. Urinalysis, NPN, and blood sugar were within normal limits, as was the serum amylase. Prothrombin time and clotting time were normal. Platelet count was 379,000. Total protein was 5.9 gm. with an A/G of 1.95:1. Plain film of the abdomen revealed an ill defined soft tissue mass on the right side of the abdomen.

A tentative diagnosis was made of acute empyema or acute hydrops of the gall bladder. Since the patient's condition seemed to be deteriorating, it was decided to perform surgery with the plan of draining the gall bladder, using local anesthesia. Accordingly the patient was brought to the operating room and 1 per cent Xylocaine® was infiltrated throughout the line of incision. A transverse incision was made over the mass, extending from the midline laterally for four inches and midway between the xyphoid and the umbilicus. After the rectus sheath was opened, a considerable amount of clotted blood was noted and removed. This pocket of blood could be followed within the rectus sheath to below the umbilicus. In order to determine whether there was any intraabdominal pathology, a small incision was made in the peritoneum. Some serosanguineous fluid was noted in the abdomen, probably a transudate due to peritoneal irritation by the hematoma. Limited exploration of the abdomen by palpation through this incision revealed no pathology. The peritoneal incision was then closed.

A longitudinal extension was made inferior to

the original incision extending to the level of the umbilicus and bisecting the anterior rectus sheath. Exploration of this area revealed the clot to be infiltrating the muscle fibers, although the major portion of the clot extended inferiorly and posteriorly to the rectus muscle. As much clot as possible was evacuated and a small portion of the blood infiltrated muscle was removed for pathological study. No actual rupture of the muscle or bleeding point from the epigastric vessels could be demonstrated.

Penrose drains were placed into the depths of the wound and the incisions closed. The patient tolerated the procedure well and postoperatively she improved gradually. There was considerable drainage of dark brown material but no bright red blood. The drains were removed on the sixth postoperative day, but were replaced the next day because a pocket of fluid had formed. This drain was removed three days later and the wound healed well.

The pathological report was: "Sections reveal fragmentation of the (rectus) muscle fibers which show only beginning degenerative changes. However, between the fragments, masses of red blood cells are present and also polymorphonuclear leucocytes, the number of which is larger than could be expected if the presence of them would be due only to hemorrhage. Similiar hemorrhage also is present in the adjoining fat tissue. The blood corpuscles in general are quite well preserved and stained. In

the sections examined, no source of the hemorrhage can be demonstrated, particularly no primary vascular lesion."

The microscopic diagnosis was: "Fairly recent hemorrhage, origin unknown."

SUMMARY

1. A case of spontaneous hemorrhage within the rectus abdominis sheath is presented.
2. This entity must be considered in the differential diagnosis of the acute abdomen, especially when
 - (a) pain is along the course of the rectus sheath,
 - (b) a mass is easily palpable, and rapidly increases in size, and
 - (c) the area of pain enlarges rapidly, with little or no radiation.
3. In case of doubt, incision should be made over the mass and the rectus sheath opened. This will avoid unnecessary opening of the peritoneal cavity.
4. Exact diagnosis often is established only by surgery.

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Mental problems program

The first International Medical Conference on Mental Retardation will be held in Portland, Me., July 27-31. There will be speakers from Germany, England, Austria, and France as well as from many parts of the United States. Dr. Ella Langer, State House, Augusta, Me., is chairman of the Committee on Finance and Arrangements.

Pan-Pacific conference

The 8th Congress of the Pan-Pacific Surgical Association will be held in Honolulu, September 28-October 5. Nine surgical specialty sections will be held simultaneously. Information and brochures may be obtained from Dr. F. J. Pinkerton, director general of the Association, Alexander Young Building, Honolulu 13, Hawaii.

Treatment of Third Degree Burn with Tryptar Ointment

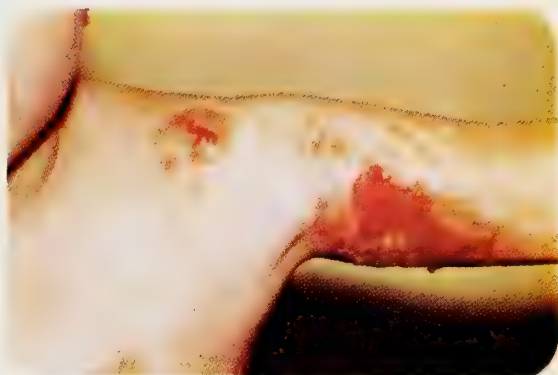
A. A. PALOW, M.D., KANKAKEE

Ordinary antibacterial agents, including antibiotics, frequently cannot penetrate the infected wound areas because they are blocked or inactivated by tissue debris. Reiser, et al.¹ have shown that topically applied trypsin and chymotrypsin rapidly digest tissue debris, but do not harm living tissue. Jenkins, et al.² reported on five cases of severe burns successfully treated with a trypsin-chymotrypsin debriding ointment. This same product, Tryptar® Antibiotic Ointment*, was used in this case. It contains crystalline trypsin and chymotrypsin to clear the burn of debris by proteolytic enzymatic action; and bacitracin and polymyxin to provide full antibiotic action to combat infection.

The patient, a 12 year old boy, sustained severe burns as a result of a gasoline fire. There were first and second degree burns over the entire anterior chest and abdominal wall, the medial and lateral aspects of the left upper arm, and of the medial aspect of the left forearm near the hand, and flash burns over the entire face.

TREATMENT

On being hospitalized, the patient was treated by debridement and pressure Vaseline® dressings to the burned areas. Skin grafts were begun two weeks later; all but one graft sloughed. Second grafts were attempted on the following lesions — left shoulder, right and left anterior chest walls, and medial and anterior aspects of the left upper arm. Ninety days later, the lesions on the left shoulder were approximately 5 centimeters in diameter; there were two lesions on the left chest 5 x 7 and 10 x 12 centimeters; one lesion on the right anterior chest wall 5 x 7



Before application of Tryptar Ointment.



3 weeks after application.



5 weeks after application.

*Supplied by Armour Pharmaceutical Company, Kankakee, Illinois.

centimeters; the lesion on the left upper arm measured 7 x 9 centimeters. All these lesions were covered by thick granulation tissue with continual weeping of seropurulent fluids.

At this point, all lesions but one were treated with Tryptar Antibiotic Ointment. After one week, the dressings were removed. Changes in the treated lesions were so marked it was decided to treat all lesions with Tryptar Antibiotic Ointment. The dressings were changed at the end of seven days, when it was decided that daily applications of the ointment would be of greater benefit. The boy's mother was taught to apply the ointment and dress the wounds at home. The lesions had practically all epithelialized when the final inspection was made, approximately five weeks after treatment was started. As the dressings were done at home, only one visit a week to the physician was needed, resulting in a considerable saving of time.

CONCLUSIONS

Although a considerable amount of ointment was used in this case, it should be remembered that this patient would have been subject to another skin graft, with doubtful results, since two previous attempts had failed. This also would have required another week to 10 days of hospitalization. Therefore, the use of this ointment has not only produced excellent therapeutic results but has greatly reduced the cost of the care of this patient.

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Before application of Tryptar Ointment.



3 weeks after application.



5 weeks after application.

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Clinical-Surgical Conferences



Diaphragmatic Hernia

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Moderator:

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Director, Surgical Education,
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Discussants:

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and Attending Staff,
Cook County Hospital

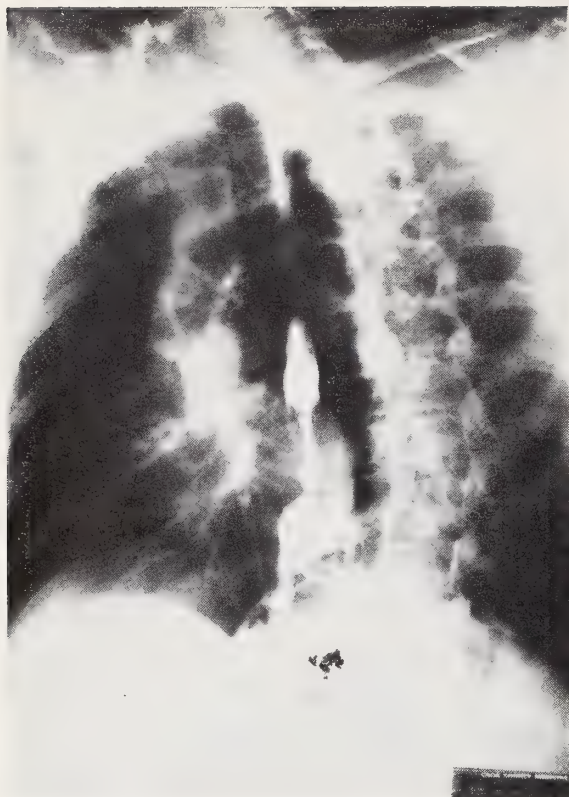
Dr. Robert Freeark: Few subjects in medicine remain as controversial and unsettled as the problem of diaphragmatic hernia. The internist and surgeon cannot often agree as to who needs surgery and the surgeons themselves frequently are at odds as to the best operative approach.

The vast majority of diaphragmatic hernias are through or adjacent to the esophageal hiatus. Their symptoms and complications involve structures on both the thoracic and abdominal side of the diaphragm and the multiplicity of problems produced makes the question of surgical interference a difficult one.

We are fortunate in having with us today two surgeons of outstanding ability and experience who are equally at home in the thoracic and abdominal cavities. I am sure they will have

some strong convictions about the management of these cases. Dr. F. John Lewis is professor of surgery at Northwestern University Medical School with a background in gastrointestinal, thoracic, and cardiovascular surgery that is unsurpassed. Dr. Peter A. Rosi is associate professor of surgery at Northwestern University Medical School and for years has been one of the most esteemed members of the attending staff here at Cook County Hospital.

Case 1: Sliding hiatal hernia with acquired short esophagus. *Dr. Eugene Broccolo* (Surgical Resident): This 63 year old white male first entered Cook County Hospital in March 1956, complaining of pain in the epigastrium of two months' duration. It had been present actually for at least eight months but had been intermittent until two months prior to admission, when it became more frequent and began occurring at night. He obtained relief by sleeping in an upright position, by initiating vomiting, or by the ingestion of soda bicarbonate. He also had nausea after every meal, occasional melena, but no dysphagia or hematemesis. Appetite was good but he was afraid to eat because of discomfort. The patient's general health had been good. A right inguinal hernia had been repaired in 1954, and there was a history of excessive alcohol intake for 30 years but not for the immediate two years prior to this admission.



Case 1

At the time of his admission he weighed 164 pounds. Gastrointestinal study revealed the presence of a small hiatal hernia. A clinical diagnosis of duodenal ulcer was entertained and medical management instituted with some relief.

The patient was followed in the outpatient clinic and during the next two years was readmitted to the medical service on several occasions because of exacerbation of his complaints. In August 1956, he first became aware of dysphagia for solid foods and had lost 25 pounds. He was seen several times by the surgical consultant and surgery had been advised, but because of his fair response to medical management he was continued on therapy and watched carefully.

His present admission was for similar complaints with a recent episode of melena. Physical examination was not remarkable except for evidence of weight loss and mild anemia. His hemoglobin was 11.8 gm. and there were 85 clinical units of free acid in the fasting gastric aspirate. Barium studies demonstrated a short esophageal hiatus hernia with proximal esophageal dilatation and distal inflammatory changes. Esophagoscopy described hyperemic gastric mu-

cosa 35 cm. from the upper teeth; the sphincter was patulous, the mucosa bled easily, and a gastric pouch extended up to a point where constriction was noted. The impression was of hiatus hernia with esophagitis, and the patient was transferred to surgery.

On June 4, 1958, through a transthoracic approach, relief of the condition was attempted. A tremendous reaction was seen around the esophagus so that the esophagogastric junction could not be determined accurately. Repair of the hernia was difficult and we were not satisfied with our efforts. We tacked the stomach up to the underside of the diaphragm and accomplished the best repair possible. The patient had an excellent immediate postoperative recovery with relief of dysphagia although he still has some abdominal pain.

Dr. Freeark: Dr. Meszaros will review the patient's X-ray films for us.

Dr. William Meszaros (Director of Diagnostic Radiology, Cook County Hospital): This first film, taken on November 29, 1957, shows considerable pouching of the stomach above the diaphragm. The esophagus opens into the stomach above the diaphragm, which makes it a sliding type of hernia. Narrowing and spasm of the distal esophagus suggest the presence of reflux esophagitis. Retrograde flow of barium from the stomach to the esophagus was easily demonstrated in the Trendelenberg position.

The next two films are dated June 24, 1958, which is a few days postoperative, and you see a small supradiaphragmatic pouch of barium which has the appearance of a small hiatus hernia. However, the amount of stomach above the diaphragm appears considerably less. The final film, taken on September 2, 1958, again shows the supradiaphragmatic pouch of barium. I believe the cardioesophageal junction also is above the diaphragm.

To summarize, this is a case of sliding hernia with esophagitis. On the final film the distal esophageal lumen looks wider and there is no radiologic evidence of esophagitis, but there still is gastric herniation through the diaphragmatic hiatus.

Dr. Freeark: We have a man with a two and half year history of symptoms compatible with a hiatus hernia. Throughout his two or three admissions to this hospital some question was raised as to whether this actually was the cause

of his symptoms. In time, he developed symptoms of complications of hiatus hernia, specifically esophagitis and possible stricture. Dr. Rosi, would you give us your opinion of the management of this case?

Dr. Peter A. Rosi: These symptoms result largely from interference with the function of the esophagogastric sphincter mechanism. This mechanism often is rendered incompetent in the presence of a hiatus hernia and thus permits the highly irritating gastric chyme to bathe the lower esophagus, producing regurgitant esophagitis.

The nature of this sphincter mechanism is a matter of controversy. There is little doubt that in normal individuals such a mechanism exists to retain ingested food in the stomach despite the consumption of large volumes or the position of the patient. Anatomically, a collection of circular muscle fibers at the lower end of the esophagus is readily demonstrated. Yet this is hardly the muscle mass that characterizes other sphincter areas and it is felt that other mechanical factors—such as the oblique entry of the esophagus into the stomach or valvelike folds of gastric mucosa—act to prevent reflux. The slinglike arrangement of the diaphragmatic crura seems to play a part here also but regardless of the mechanism, competency is lost and herniation and regurgitant esophagitis occur, as in the case presented.

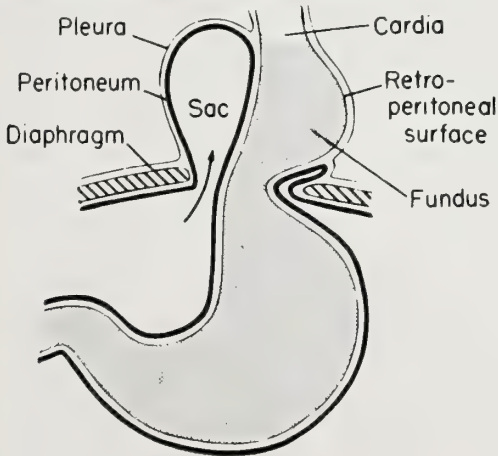
A large series of these cases has now been reported and it seems that the aging process, with its associated lack of muscle tone, has something to do with it. As the diaphragmatic

muscle sling around the esophagus becomes weaker the esophagus is permitted to come forward and the angulation between the esophagus and cardia becomes less, favoring reflux. Concurrently the muscle weakness permits the sliding hernia to become worse.

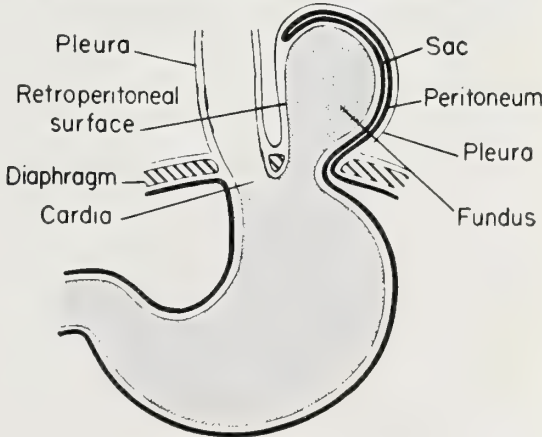
In doing a vagotomy, you are provided with an unusual opportunity to study the anatomy of this region. You can readily see the tremendous amount of protection at the esophagocardiac junction in the normal. The crural fibers come down around the stomach, protecting and holding it in the abdomen. With increased intra-abdominal pressure or with atrophy of the tissues, this protection weakens and hernia begins.

The big problem here is to decide which case is surgical and which is not. Most sliding hernias that do not produce reflux do not produce symptoms. Many times symptoms may be due to other causes as these hernias simulate upper abdominal or chest disease of various types. I don't know how to demonstrate whether a patient is suffering from sliding hernia or coexisting abdominal or thoracic disease. Some workers have injected air intraperitoneally and elevated the diaphragm and reduced the stomach into the abdomen, but I don't think the patient would like that. In the case presented an increasing esophagitis could be demonstrated due to reflux regurgitation of the acid gastric juices. There are two problems involved in treating this condition: Get the stomach back into the abdomen by repairing the hernia, and restore as well as possible the mechanism that prevents reflux. If there is hyperacidity, even mild in nature,

A. Sliding (Short Esophagus)



B. Parahiatal (Para-esophageal)



something may be done to correct it. Vagotomy and pyloroplasty are possibilities.

What about the surgical technique used in this condition? Many surgeons like to do them from above (transthoracic) while others prefer the abdominal approach. We prefer the latter for in most cases—and certainly with a very narrow constricted costal arch—you can get up close to the esophagus and work just as easily as by the other route. There are other advantages. If gallstones are present they can be taken care of, or you can reduce the total amount of acid production in a hyperacidity patient by some procedure on the stomach itself.

If bleeding or anemia has been a problem, a careful intra-abdominal exploration can eliminate other possible sources that might have been overlooked even with preoperative X-ray studies. In general the time required to open and close the abdomen is far less than a chest procedure and the recovery period, a lot more comfortable.

For these and other reasons we prefer the abdominal approach to almost all hiatal hernias. Repair of these hernias involves imbricating the crura behind the esophagus to hold the stomach in the abdomen. The esophageal hiatus is closed down enough so that you can just get the tip of a finger alongside the esophagus as it courses through the diaphragm. There is no agreement on how tight it should be. At first we made it quite loose but there were recurrences. Recently we have been making it much tighter and getting better results.

What about restoring the angle between esophagus and the stomach? Many times you can put a few sutures between the anterior wall of the stomach and the diaphragm to angulate the esophagus and stomach more acutely. Some have taken sutures between the esophagus and cardia but care is needed as they may tear out of the esophageal wall and cause perforation.

If the patient does not have hyperacidity, that is all you need do. If he has coexistent hyperacidity, you can offer him a great deal with vagotomy and pyloroplasty. Then, most of your patients will get good results. The group that has recurrences is an entirely different story, and they may have to have jejunal interposition operation for relief of the chronic type of esophagitis.

Dr. F. John Lewis: Do I understand correctly

that there is still stomach above the diaphragm?

Dr. R. Freeark: We are very much afraid that that is true.

Dr. Lewis: Do you think this is a short esophagus?

Dr. Freeark: Yes. At surgery there was considerable doubt as to whether esophageal length would ever permit complete reduction.

Dr. Lewis: When you have a short esophagus almost always it is acquired. Sweet described four cases in a series of 111 which he thought were of congenital origin, and Allison thought there was one congenital short esophagus in a series of 250 cases of esophageal hiatal hernia. Congenital short esophagus, I think, can be thrown out of consideration. Most cases of acquired short esophagus seem to have esophagitis and ulceration, but there is no evidence of an active esophageal ulcer in this particular case.

When you are faced with the situation of an esophagus that will not allow you to pull the stomach down below the diaphragm into its normal position, then it is a perplexing problem. Some people feel you can always get it down through the hiatus, but there are cases—and this would appear to be one—where great difficulty is encountered. One solution is to transplant the esophagus to the dome of the diaphragm. This may shorten the required length considerably. If this is not successful in restoring the stomach exclusively to the abdomen, and it appears impossible, then you can stitch the stomach to the diaphragm and leave it above. The theory is that esophagitis is caused by obstruction, thereby allowing reflux; if you relieve this obstruction you can count on the sphincter action to get rid of the esophagitis problem.

It is my personal opinion that leaving the stomach above the diaphragm in some cases is a good solution. Another recommended procedure is to resect the entire area of distal esophagus and proximal stomach. This I do not think is a good solution; sometimes it is essential if there is real stricture at that point.

Dr. Freeark: This man tells us he is having a little abdominal pain. He is eating and has some difficulty swallowing. In general he is much improved since his operation. He says that he could neither eat nor sleep prior to surgery. Now I would like to ask Dr. Lewis for an expression of opinion about the surgical approach

to this type of hernia. Do you prefer thoracic or abdominal approach?

Dr. Lewis: My own preference is for transabdominal approach although some surgeons with more experience and of stronger character have shifted back and forth. In a few patients the transthoracic approach will be easier but the transabdominal approach gives you a better view of the crura, and a chance to deal with other pathology. It is quite evident that you can do the operation by either approach but there is some question whether you can do it consistently well by one as opposed to the other route.

Question: How long would you put up with this man's symptoms before you re-operated on him, or is this feasible? Obviously you have not completely solved the problem. Would you operate again or what would you advise?

Dr. Freeark: We like to think this particular patient is not greatly distressed by his postoperative symptoms. Certainly they are much milder than the complaints prior to surgery. This raises the question as to who must shoulder the responsibility for the failure of surgery to give complete relief. I am wondering if the persistence in medical management for over two years, with evidence of progressive herniation and esophagitis, does not present to the surgical team an almost insoluble problem. A scarred, shortened, and inflamed esophagus is certainly much harder to deal with than the relatively simple hiatus hernia with which his condition began.

Dr. Rosi: Preoperatively, if the patient is having symptoms of sliding type of hernia, he should have had surgery after a short course of medical management proved ineffective. He has never been overweight so the problem of weight reduction does not arise. If we assume that herniation remains or has recurred, keep in mind that operation next time would be of some magnitude. I would wait until the patient is very uncomfortable, so that his life is not quite bearable and he is willing to submit to another major procedure. The next surgical procedure I would entertain would be resection of the lower esophagus and the cardiac end of the stomach and interposition of a jejunal loop. To re-establish this continuity is a big order but it probably is the best approach.

Dr. Meszaros: If he has increasing symptoms would dilatation of the esophagus help?

Dr. Rosi: If he has increasing symptoms you have not overcome the etiologic factor. Dilatation of the esophagus would give some relief but he would still have regurgitation.

Dr. Paul Nora (Surgical Resident): If you were doing a cholecystectomy on a patient and you found a hiatus hernia would you fix it at that time, if the patient had had no previous symptoms that you could ascribe to the hernia?

Dr. Rosi: A great deal depends upon the patient's age. In a young individual you could repair it without trouble and probably forestall some symptoms. In an older individual without symptoms it is a questionable undertaking. I think you must consider why the patient is being operated; it may be that he is suffering partially from a sliding hernia as well as from gallstones. If he has had colic, he is suffering from gallstones and the hernia had nothing to do with it and should be ignored.

Case 2: Composite Type of Hiatal Hernia.
Dr. James Kane (Surgical Resident): This 64 year old obese white female was referred to Cook County Hospital because of symptoms of anemia. She had been informed three months before admission that she was anemic but no diagnostic studies had been pursued. One week before admission she had a black stool on two occasions and noticed a moderate, dull, epigastric pain after eating. There also had been increased shortness of breath for the past few months. She had delivered five normal children. In 1948 she had a hysterectomy for carcinoma of the cervix. There is a strong family history of carcinoma.

On physical examination she was pale and obese. Temperature, respirations, and pulse were normal, and her blood pressure was 155/70. Her heart was enlarged, and there was a grade II apical systolic murmur. Abdominal and rectal examinations were negative, and the stool benzidine was negative. The patient denied nausea, vomiting, excessive gas, indigestion, or prior episodes of abdominal pain.

Laboratory tests disclosed the following: Urinalysis negative. Hemogram: hypochromic anemia, hemoglobin 40 per cent, hematocrit 22, and RBC 3.5 million. Biochemical studies normal; total cholesterol 220. Electrocardiogram: left heart strain. X-ray films are on the view box.

Dr. Meszaros: These are all preoperative films.

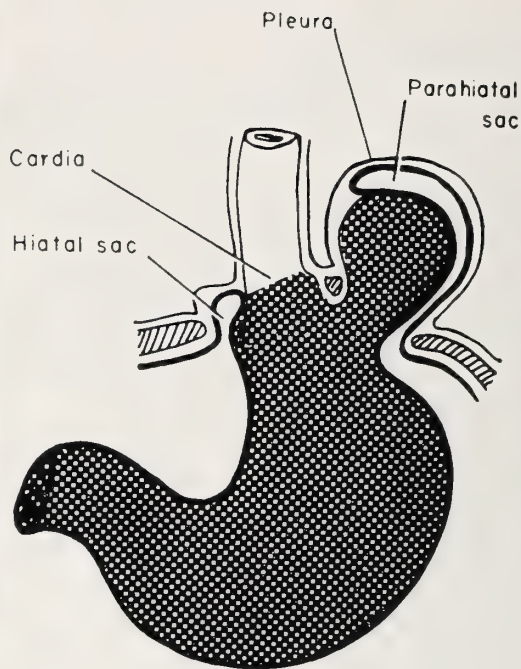


Case 2

The first shows a faintly visualized gall bladder with many stones. She has a huge hiatus hernia superimposed on the heart shadow, and you have to rule out lung cysts and abscesses. Much of the stomach is above the diaphragm, and the esophagogastric junction must be above too. So we have a huge hiatus hernia with the esophagus coming into the stomach above the diaphragm. The esophagus does not look as short as the previous case. There is some tortuosity and the chances of pulling the stomach down beneath the diaphragm are much better than in the first case.

Dr. Kane: The patient was prepared for surgery; she was given 3,500 cc. of blood, and went to surgery on August 8, 1958. At surgery it was felt she had a composite type of esophageal hiatus hernia with some shortening of the esophagus and a paraesophageal hernia. Repair was from within the abdomen. Her recovery has been uneventful, and she was discharged to the clinic on the seventh postoperative day. (Patient shown here)

Dr. Meszaros: Would you define what you mean by a sliding, paraesophageal, and composite type of hernia?



Hiatus hernia (composite type)

Dr. Freemark: I understand that the composite or combined type has some features of both. What we are attempting to distinguish is the paraesophageal or parahiatal hernia in which the esophagogastric junction remains in its normal position at or below the esophageal hiatus and the bulk of the hernia occurs laterally or parahiatally to this location. In the sliding type, the esophageogastric junction slides above the hiatus and there is no interposed diaphragm between the herniated stomach and the esophagus. A combination hernia would be one in which both elements of herniation coexisted. The distinction often is difficult, and in this case there was some disagreement, even at surgery.

(On questioning the patient it was learned that she felt well and was having no difficulty at present; She had had some trouble swallowing solid foods during the second week after surgery but by the third week this had disappeared and she is eating well.)

Dr. Freemark: In contrast to the first case presented, this patient had a relatively short history. The main indication for repair here was the complication of bleeding. The transabdominal approach was used, and the gall bladder was

removed at surgery.

Dr. Lewis: Usually the paraesophageal type of hernia is not associated with peptic esophagitis and bleeding such as were found in this case. Many aspects of this woman's case fall into the classical picture. About two-thirds of these lesions occur in the female, most of them between the ages of 50 and 70 years. There is good evidence that the hernia gradually gets bigger. Blades defends the thesis that these hernias should be operated upon even when they are asymptomatic because many cause trouble as they grow. He had roentgenographic evidence in about 12 cases that the hernia grew in size over a period of years. I don't think most surgeons would agree that asymptomatic hernias should be operated upon. In many patients the condition is picked up incidentally; they remain symptom free for years.

Interest in these hernias has developed only in the last 10 to 15 years. Since this has occurred, better X-ray techniques have been used so more hernias are being diagnosed. The fate of a large number of asymptomatic hernias has not been worked out.

Except for the bleeding, this woman might have been considered neurotic because her symptoms were so vague. One difficulty in analyzing patients' problems is that neurotic tendencies may be present in addition to the hernia so their improvement or failure to improve with any management is dictated by psychologic reasons.

As for the success of operation, it troubles me to find that most surgeons who report their results have a recurrence rate of only 4 or 5 per cent, yet in my experience the rate is considerably higher. What is the recurrence rate? I don't know. If it is 10 per cent for inguinal hernia, it must be considerably higher for hiatal hernias.

It is my conviction that the technique of repair deserves further study and that the follow-ups should be as elaborate as the original studies. The situation in the first case, where the repair is really not successful, is quite common. If you have done any of this surgery you get the impression that it is not as nice and firm as repair of an inguinal hernia, for example. It is done with muscular tissue and little fascia or firm

tissue is available to work with. You must remember that you are dealing with structures that move constantly and on the upper side of the diaphragm is a chamber with a constant negative pressure. This means that abdominal pressure exerts a greater relative force than in the inguinal region.

The immense sensitivity of the esophagus to acid has been mentioned. In experimental work, it has been shown that if you drip acid gastric juice on the cat's esophagus it will erode through within 6 to 8 minutes almost invariably. It is remarkable how sensitive it is. Many experiments have demonstrated that if you bathe the esophagus in acid-peptic juice you get esophagitis and perforation. A patch of gastric mucosa transplanted to the esophagus will cause ulceration of the esophagus. If the sphincter mechanism is lost it causes esophagitis but equally important is the erosive character of the gastric contents. It is a good thing the stomach empties through the duodenum rather than the esophagus. This consideration has led to development of the jejunal interposition operation mentioned earlier. I have had little experience with it and have no strong opinions of its use in this disease, but it deserves consideration where the risk becomes necessary.

The first patient presented here was approached by the transthoracic approach. That is the better approach in the short esophagus because you can free the esophagus up to the aortic arch and bring it down further and bring the cardia below the diaphragm. In spite of this approach, the desirable result was not obtained in that case.

Dr. Rosi: The second patient came in with melena and anemia. The question is, what caused this massive upper gastrointestinal bleeding. Is it due to diaphragmatic hernia and if so, when should it be repaired? Many times we operate upon these patients and bring the stomach down and the outer surface looks entirely normal without any evidence of the origin of eroded vessels. These bleeding points are undoubtedly from the mucosal side of the herniated pouch. In some patients if you look at the mucosa through an esophagoscope there occasionally is acute ulceration around the esophagogastric junction. At surgery the patient may have active bleeding from the cardiac end of the stomach. As you pull down the herniated end of the cardia into

the abdomen you may see engorgement of the veins in that particular portion of the stomach. In those patients you are sure you will get a good result. In others, it still remains a question whether you relieve symptoms or not.

Years ago some work was done on phrenicectomy in patients with bleeding and diaphragmatic hernias, and good results were reported. We did a few at that time but the patients continued to bleed a year or so later. They had excellent results for a year and then the condition recurred.

Dr. Lewis: I have not used phrenicectomy in these patients. There may be some indication for its use. Many cases are treated satisfactorily medically. Usually the ones I see demand more than phrenic crushing by the time surgery is acceptable.

Dr. Freeark: Recently a group has recommended the use of pneumoperitoneum as a non-operative definitive measure. Have you any experience with that?

Dr. Rosi: No.

Dr. Lewis: No.

Dr. Freeark: We have postoperative X-ray films on the second patient.

Dr. Meszaros: Postoperative roentgenographic study showed that the hernia has been completely reduced. The stomach is completely below the diaphragm. There is some narrowing of the distal esophagus with some retention of food, indicating stasis.

Dr. Freeark: This stasis was at first symptomatic and has now disappeared without treatment. Dr. Rosi's conviction about a tight closure was adhered to in this case and we have no reason to regret it.

Dr. Freeark: How do you stand on concomitant vagotomy in this problem of sliding hernia? Do you practice routine vagotomy?

Dr. Lewis: If there is severe ulcer diathesis, vagotomy with pyloroplasty may be the best approach. Subtotal gastric resection has even been recommended. Some patients demand additional operation but what it should be I am not prepared to conclude. I have done gastric resection, but vagotomy may be better. Some of them will have duodenal ulcer with peptic esophagitis and perhaps an additional operative procedure to reduce acidity should be considered at the first operation. I really am not sure of the best course.

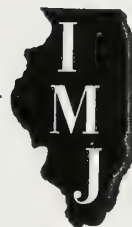
Question: How do you prefer to approximate the crura in the repair of a hiatus hernia, posteriorly or anteriorly?

Dr. Rosi: Posteriorly. This is important in re-establishing the esophagogastric angle.

Dr. Freeark: Have you ever transplanted the hiatus?

Dr. Lewis: Not recently, but I think I would still do it in case I could not get the stomach down below the diaphragm by other means. I am sure it is not as good a procedure as others but it may have a place in this condition.

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Leukemia

Mortality statistics show a progressive rise in the incidence of leukemia since 1900. An estimated 11,000 new cases are observed in the United States each year. This increase cannot be accounted for adequately by the longer life expectancy nor by improved diagnostic methods.

The etiology of leukemia is unknown. An association between exposure to ionizing radiation and the subsequent development of the disease has been noted. Radiation appears to increase the occurrence of acute and of chronic granulocytic leukemia, but not of chronic lymphocytic leukemia.

Acute leukemia occurs almost exclusively in children and young adults. Chronic granulocytic leukemia is seen chiefly in the 20 to 45 year age group. Chronic lymphocytic leukemia occurs most frequently above age 55. The type of leukemia is diagnosed on the basis of cell morphology as seen in blood, bone marrow, and at times, tissue biopsies.

Since leukemia was first described in 1845, many agents have been found to alter the manifestations of this disease. Research on potentially effective substances continues at an intense level, and new experimental drugs are announced periodically. The drugs of choice today may well be discarded tomorrow. None of these agents has ever prevented or cured leukemia.

The selection of antileukemic therapy or the decision to defer specific therapy is determined

by the type of leukemia, clinical manifestations, and hematologic changes. The agents used in the treatment of acute leukemia fall into two groups: the steroids and the antimetabolites. The steroid hormones (cortisone, hydrocortisone, corticotropin or ACTH, and prednisone,) in relatively small doses, modify the course of many cases of acute leukemia. In massive doses the steroids often induce complete clinical and hematologic remission. The antimetabolites include folic acid antagonists, purine antagonists, and glutamine antagonists. The most frequently used folic acid antagonists are aminopterin and amethopterin (Methotrexate®). Amethopterin is considered preferable.

6-Mercaptopurine (Purinethol®) is the drug of choice of the purine antagonists. 6-chloropurine and Thioquanine® do not appear to have any advantage over 6-mercaptopurine. The glutamine antagonists such as Azaserine and DON (6-diazo-5-oxo-L-norleucine) have no practical value when used alone in human leukemia. Whether they will be helpful in combination with 6-mercaptopurine is under study. Combinations of steroids and 6-mercaptopurine produce a 76 per cent complete remission rate in children while in adults the remission rate is 38 per cent. As a rule, more complete and prolonged remissions occur in children. The poorest results are obtained in patients over 50. Nonspecific measures of importance in therapy include transfusions for anemia, specific antibiotic therapy when in-

fection occurs, and platelet infusions for thrombocytopenia.

The agents that have been used in chronic granulocytic leukemia include X-radiation, radioactive phosphorus, urethan, Triethylene Melamine®, nitrogen mustard, demecolcine (Colmedie®), and busulfan (Myleran®).

In recent years Myleran has been used more extensively than any of the other agents in the therapy of chronic granulocytic leukemia. Results appear similar to those obtained from X-radiation. Bone marrow aplasia is the only serious toxic effect of this drug. Other side effects include amenorrhea, pigmentation of the skin, and gynecomastia.

Many patients with chronic granulocytic leukemia ultimately develop an acute exacerbation closely resembling acute leukemia. At this time 6-mercaptopurine and steroids may sometimes cause a remission.

Indications for therapy are more varied and the available agents are fewer in chronic lymphocytic leukemia than in chronic granulocytic leukemia. Chronic lymphocytic leukemia in the aged may run a benign course and have little effect on life expectancy. Generally, cases of chronic lymphocytic leukemia that do not appear to be progressive should not be treated.

Irradiation, nitrogen mustard, Triethylene Melamine, and chlorambucil (Leukeran®) are the principal forms of therapy for chronic lymphocytic leukemia. The steroids are mainly of value in controlling the secondary hemolysis and thrombocytopenia that occur in some patients.

Although there is still no cure for leukemia, in certain of these conditions, striking clinical and hematologic remissions can be produced. Many patients have been able to function for longer periods of time in their usual capacities, and life has been prolonged. The rapid rate at which new drugs are being discovered and tested should lead to the development of superior agents, if not cures, in the foreseeable future.

Louis R. Limarzi



Polio has not been conquered

The campaign of immunization against paralytic poliomyelitis, conducted on a national scale over the past two years, is the most spectacular and successful battle ever waged against a disease. The incidence of polio dropped from a 5

year average of 35,321 cases from 1952 through 1956 to 5,894 cases in 1957, a decrease of 83 per cent. Only 5 per cent of the paralytic cases occurred in the most susceptible age group—children under 5 years of age—who had been protected by three doses of the vaccine. A 30 year battle against diphtheria, and a 100 year war against smallpox cannot claim results comparable to those obtained in a two year fight against polio.

Vaccination against polio has fallen short of its goals, however. Of the 110,000,000 susceptible people (under 40 years of age) in the United States more than 50 per cent are unvaccinated or incompletely vaccinated. The precipitous drop in the national incidence of polio in 1957 has been halted. In fact, the figures for 1958 show an ominous rise—a 30 per cent increase in paralytic cases over 1957.

There were serious epidemics in three areas in the United States last year. All occurred in low socioeconomic groups where the number of vaccinations was low. In all areas, the incidence of paralytic cases was highest in children under 5. Even in areas in which medical care is more adequate, the steep decline in polio was slowed or halted.

These disquieting facts are due mainly to two factors:

1. *Incomplete vaccination.* As the incidence of polio decreased, public apathy took over. Many families neglected to follow through on the vaccination series so zealously begun when the disease was rampant in their communities. As a result, in a discouragingly large number of instances three, or even two injections were not completed. The protection afforded by three properly spaced doses for all age groups is estimated at 87 per cent; for two inoculations, 74 per cent; for one, 35 per cent.

2. *Inadequate potency of vaccine.* The unfortunate experience in the early days of polio vaccination, when the safety of vaccine was inadvertently sacrificed for adequate potency, has been reversed too greatly. The present vaccine is undoubtedly free from active virus capable of producing the disease but increased safety is accompanied by decreased potency. This is being carefully and cautiously corrected. But our present low potency vaccine does not give permanent immunity. Protection begins to wane about a

year after the third injection.

It is squarely up to us physicians, and as important members of the team protecting the health of the people of Illinois, to collaborate in correcting these errors, and in realizing the goal of complete protection against polio. Here is what we must do:

1. We must see that *all* of our patients between the ages of 2 months and 40 years have two injections of polio vaccine one month apart, followed by a third injection five to seven months later. If possible, the third injection should be given before the polio season begins in July or August. However, there is no objection to giving any of the injections during the polio season. If an individual had one or two injections even a year ago, it is not necessary to start over, but only to continue with the second or third injection.

2. Because of the low potency of our present vaccine, a fourth injection is advised by all authorities. It should be given one year after the third. It restores active immunity within a few days, even if given several years after the initial series of injections. It is probable that this is a temporary expedient. With increasing potency of the vaccine, the duration of immunity from three injections will probably be prolonged greatly or indefinitely.

3. A review of the incidence of polio in the past year shows that the highest incidence of paralytic cases is occurring in areas of greatest congestion and of lowest income, and in children under 5. While urging vaccination for all under 40, we should concentrate on the areas and the groups in which polio flourishes, and from which it spreads. We must not limit our efforts to our own patients. We should work on a community level as vital members of a team made up of all available local resources—health departments, clubs, PTA, parent groups, schools, newspapers, and all other interested organizations in our area.

We must use whatever aids are available. Pharmaceutical houses are supplying placards for office display. The AMA has a series of mailing cards for notifying patients regarding their first three polio injections. They can be obtained through the Division of Communications, American Medical Association, 535 N. Dearborn St., Chicago 10.

Vaccine can be purchased through drug stores. A limited supply can be obtained free of charge

through local health departments or through the Illinois Department of Public Health at Springfield. It is recommended that free vaccine be reserved for indigent patients. Through its local medical society, each community must work out its own method for reaching the indigent, the indolent, the complacent, and the uninformed.

In line with the unanimous recommendation of the House of Delegates of the AMA on Dec. 5, 1958, the Illinois State Medical Society and the Illinois Chapter of the American Academy of Pediatrics are sponsoring jointly a drive to conquer polio in Illinois. By action of the Council of the Illinois State Medical Society on Feb. 1, 1959, the secretary of each county medical society will be instructed to develop and implement a satisfactory program to meet the local situation.

Further information and advice may be obtained by writing to the Committee on Poliomyelitis of the Illinois State Medical Society, Monmouth, Ill., or to the committee of the same name of the Illinois Chapter of the American Academy of Pediatrics, P. O. Box 1116, Evanston, Ill.

John Lester Reichert



Backward step

The American College of Physicians has joined Cutter Laboratories in appealing the decision of January 17, 1958 of the Superior Court in Alameda County, Cal., awarding two children, Anne Gottsdanker and James Randall Phipps, damages for polio infections allegedly resulting from the use of Cutter vaccine despite the jury's finding that Cutter was not negligent.

In its *amicus curiae* brief (friend of the court) it points out that "the creation of an absolute liability concept would greatly impair future progress. The introduction of new products and procedures would be stifled and mankind would be denied the continual advancement of medical science We believe that when, as in the cases before the court at this time, a biological is made according to strict government specifications and complies with the best scientific and productive knowledge available, and when the manufacturer is absolved of all possible negligence by the jury, as this defendant was, no liability should be incurred when an injury occurs because of the user's own peculiar suscep-

tibility or because of insufficient scientific knowledge at that time. To create such an absolute liability would be to saddle the world of medical science with an unfair burden We in no way feel that we are overdramatizing these results for it is clear that researchers would be unwilling to try new drugs on patients, practicing physicians would be afraid to avail themselves and their patients of the new wonder drugs, and pharmaceutical houses would not be willing to manufacture new products should this concept be applied, for it holds the defendant liable without fault and liable for the unknown.

"Since the fact is self-evident that certain treatments will save lives or alleviate suffering, it is unrealistic and unreasonable to say that there must be no unknown untoward effects. If we take this position, then the conquering of disease in the future will be far slower, as neither manufacturers nor insurance companies can afford to insure against the unknown and the unpreventable. Thus, the lifesaving drug or biological that may save thousands of lives every year from cancer which might be available tomorrow would probably, under the absolute liability situation, be withheld for another ten years of testing and 'wait and see' and 'make sure' periods. To be sure, a statistically small number of hypersensitive or hypersusceptible individuals thus will be saved from harm, but in the meantime thousands who might otherwise live, or live without suffering, will necessarily be denied medical care.

"How can any scientist, physician, hospital, or pharmaceutical producer become involved in any forward steps in medicine, no matter how surrounded by standards, if he is to be held responsible for knowledge that does not, and cannot, exist until the future unfolds?"

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Dr. Ernest Edward Irons, AMA past president, dies

"The two unknown youths who committed this crime got only a handful of change—but they robbed Chicago of one of its great men."

This was the concluding paragraph of an editorial in the *Chicago Daily News* which paid tribute to Dr. Ernest Edward Irons, a past president of the AMA, whose death in the Presbyterian Hospital, Chicago, on January 18, at the age of 81 was a great loss to medicine and to the

public which he had served so nobly in 55 years of practice.

Dr. Irons was knocked down by two thugs near his home on the night of November 19 and robbed of \$1 in change. He never recovered from the injuries he received. Although a heart condition contributed to his death, a coroner's jury decided that the holdup injuries also were factors and returned a verdict of manslaughter. The assailants have not been captured.

Dr. Irons was born in Council Bluffs, Iowa, February 17, 1877. He obtained his bachelor of science degree from the University of Chicago in 1900 and his doctor of medicine from the Rush Medical College, Chicago, in 1903. He has practiced in Chicago since that year. The University of Chicago in 1912 awarded him the degree of doctor of philosophy for research.

From 1902 to 1904, he was assistant in pathology and bacteriology at the University of Chicago. Early in his career he became associated with the Presbyterian Hospital in Chicago. From 1923 to 1936 he was dean of students and dean of the faculty of his alma mater, where for many years he was clinical professor of medicine and chairman of the department. Since 1941, he held the title of (Rush) clinical professor emeritus at the University of Illinois College of Medicine.

In 1939, the Kappa Chapter of the Nu Sigma Nu Fraternity at Rush Medical College and at the University of Chicago established an annual lecture in his honor. In 1940, he gave the Charles R. Bardeen Memorial Lecture at the University of Wisconsin Medical School.

Dr. Irons was elected to membership on the Council on Pharmacy and Chemistry of the AMA in 1923, and served for 18 years. In 1929-1930, he was chairman of its Section on the Practice of Medicine and from 1940 to 1948 he was a Trustee. Following the death of Dr. Austin A. Hayden, Dr. Irons was elected to fill the unexpired term as secretary of the Board of Trustees. In 1941, he was elected secretary of the board, serving until 1948 when he was chosen president-elect. As president, and subsequently, he was a tireless worker in the campaign against socialized medicine.

He was a representative of the AMA in the World Medical Association. He was an ex-regent of the American College of Physicians, and in 1945, president; president of the American As-

sociation for the Study and Control of Rheumatic Diseases in 1934; of the Society of Medical History of Chicago in 1940; and of the Institute of Medicine of Chicago in 1946. He was a member of the Illinois State Medical Society, Chicago Medical Society, American Board of Internal Medicine, the American Rheumatism Association, Association of American Physicians, Central Society for Clinical Research, American Society for Clinical Investigation, and the American Association of Pathologists and Bacteriologists.

In World War I, Dr. Irons became colonel in command of the Base Hospital at Camp Custer near Battle Creek, Mich., and during World War II he represented medicine in many different capacities, including several important committees of the National Research Council.

In 1947-1948, he traveled abroad for the United States government to study health conditions. He went to Japan to recommend changes in that country's health programs for the post World War II occupation administration of Gen. Douglas MacArthur. He also made a study of medical practice in Puerto Rico.

Dr. Irons in 1947 was appointed by Mayor Martin Kennelly to the board of directors of the Chicago Municipal Tuberculosis Sanitarium. His tenure there, Dr. Irons cut the institution's death rate to one fifth of what it was in 1946, eliminated a long waiting list, and campaigned vigorously for more state aid. He was consulting physician at the Presbyterian Hospital. In 1946, he was awarded the "Goldheaded Cane" of the School of Medicine of the University of California. In 1958, he was presented the Chicago Medal of Merit for his contributions to the city, and the first annual Tuberculosis Institute Medal in 1958 for outstanding work in the field.

Distinguished for his contributions in medical research, especially in focal infection, iritis, and rheumatic diseases, Dr. Irons was accorded many honors by the medical profession. His recent writing on medical economics and social medicine have been extensive and authoritative.

Dr. Irons is survived by two sons, Dr. Edwin N., a staff physician at the Presbyterian Hospital, and Mr. Spencer E., an attorney, and six grandchildren. His wife, Gertrude, died in 1951.

Council meeting minutes

The regular February meeting of the Council was held at the Hotel Sherman, Chicago, Sunday, February 1, 1959, with the following present: Oldfield, O'Neill, Lorne Mason, Youngberg, Camp, Clark, Kirby, Hesseltine, Reichert, Portes, Piszczek, Dooley, Endres, Reisch, DuPuy, Good-year, English, Montgomery, Fullerton, Hamilton and Reavley. Also present were: Percy E. Hopkins, Roland R. Cross, J. O. Firth, Walter C. Bornemeier, Wm. Schowengerdt, Everett Coleman, Paul A. Dailey, Louis R. Limarzi, James H. Hutton, Harry Mantz, Edwin Hirsch, F. M. Nicholson, George Turner, Richard J. Bennett; and Messrs. John W. Neal, Walter L. Oblinger, Albert Scott, and John A. Mirt.

Motion: (Fullerton-Piszczek) that the minutes of the December 14th Council meeting be approved as mailed to members. Motion carried.

Reports of officers

Dr. Oldfield reported as president, listing the meetings which he had attended since the last Council meeting. He reported that he had secured Dr. Frank L. Meleney from Miami University, Florida, to present the Address in Surgery; and Dr. Jerome W. Conn of the University of Michigan, Ann Arbor, for the Address in Medicine. He also has secured the speaker for the annual dinner, May 20, Miss Ann Landers, who will be the first woman to serve in this capacity and also the first woman to be seated at the speakers' table.

Dr. Camp distributed the financial statement and added that since the first of January, 1959, \$169,046 in payment of dues had been received in his office. He stressed the importance of the counter secretary sending in all dues as they are received, and not holding them up until all physicians in the county have paid.

Dr. Montgomery reported as chairman of the Council. There was no official report from the Executive Committee, which had met on Saturday evening. The special committee has recommendations to make relative to a retirement plan for employees of the state society which will be presented at the March 8th meeting.

Advisory committee to I.P.A.C.

Dr. Montgomery reported as chairman of the

Advisory Committee to the Illinois Public Aid Commission. The Committee will appear before the commission in the near future and request an advance in fees for the physicians of this state.

Medical service and public relations

Dr. Hopkins, chairman, requested the floor for Mr. Oblinger, Mr. Neal and Mr. Scott.

Mr. Oblinger reported that the Legislative Manual was off the press and available for distribution throughout the state, and for the physicians attending the legislative meeting that same afternoon.

H. B. #6, developed by the ISMS, which provides for the testamentary disposition of the human body or parts thereof, has been introduced before the General Assembly. The bill is being sponsored by Mr. George Coutrakon and Dr. William A. Moore.

Two bills are being prepared to define the term psychiatrist as used in connection with the examination of persons charged with sexual crimes and to provide for the commitment and detention of those charged with being sexually dangerous.

A bill is being prepared to establish the definition of a privileged communication between a physician and his patient; and another bill to provide for the reasonable compensation of expert witnesses in court proceedings. Work on this latter bill is being deferred until the Committee on Industrial Health completes its suggestions along this line.

A bill has been prepared to define a professional person under the act requiring reporting of major visual limitations to the Department of Public Welfare.

Contact has been made with the Bar Associations to alert them relative to a joint program during the annual meeting, at the dinner to be held on Tuesday evening, May 19th.

The dinner for the members of the General Assembly will be held at the Leland Hotel, Springfield, on Tuesday evening, March 31st.

Mr. Oblinger introduced Mr. Albert Scott of Canton, associate counsel for the Illinois State Medical Society.

Committee on nutrition

Paul Dailey reported as chairman of the Committee on Nutrition. The joint conference on

nutrition, sponsored by the committee of the ISMS and the Illinois Nutrition Committee, was held in Bevier Hall, at the University of Illinois, October 4, 1958. It was highly successful. There were 141 registrants (dietitians, nutritionists, physicians, home economics teachers, students, and faculty members of the University). The ISMS committee has been asked to sponsor another joint meeting in the fall of 1959 to be held at Western Illinois University in Macomb. It is the desire of the Committee on Nutrition of the ISMS that the Council grant the committee permission to carry on this worthwhile program. The committee at this time, desires permission to explore the possibility of participating in the proposed 1959 program.

MOTION: (DuPuy-Piszczek) that the Council grant the requested permission.
Motion carried.

Journal committee and editorial board

Dr. Reisch reported that the joint meeting of the Journal Committee and the Editorial Board had been held on January 7. No special report will be made for the Council at this meeting. However, it is the suggestion that all members of the Council read over the recommendations of the Editorial Board (sent to all members by mail) and consider action at the next meeting of the Council. The duties of the Editorial Board should be more clearly defined, as well as how it is to function, and the rulings should come from the Council, since the publication of the Journal is one of its responsibilities.

Dr. Hirsch, as chairman of the Editorial Board, asked for Council guidance for future editorial board activity, and for an outline of responsibility and procedure. Dr. Montgomery stated that this question of responsibility for the editorial policy of the Journal and the duties and prerogatives of the Editorial Board had been a problem for a long time, and he would suggest that a committee of three be appointed from the Council to meet with the Editorial Board and formulate duties and bring recommendations back to the next meeting of the Council, to be made a matter of record. The committee appointed was Harlan English, Chairman, H. Close Hesseltine, and Edwin S. Hamilton.

Committee on narcotics

Dr. Reisch reported as chairman of the Com-

mittee on Narcotics. The committee met Sunday, January 25, in Springfield to consider possible changes, additions, and deletions to the Uniform Narcotic Drug Act. Present were Drs. Eli Borkon, G. S. Schwerin, J. E. Reisch as chairman, Mr. Walter Oblinger, and—by invitation—Mr. Malachi L. Harney and Mr. Paul J. Maton of the Division of Narcotic Control.

First consideration was given an amendment that would eliminate the necessity of pharmacists forwarding to the Division regular reports of Class B drugs sold on prescription. This amendment would bring the Illinois law into conformity with federal regulations.

Consideration also was given the treatment of the addict. The current law requires that the addict be treated in a county, state, or federal institution, and the proposed change would make it possible to treat the addict in certain private institutions (certain private sanatoria and psychiatric divisions of general hospitals). Mr. Maton suggested that the ISMS might be able to select the institutions or hospitals that would qualify, but the committee felt sure that the society would not choose to set itself up as an accrediting agency. It was suggested by the committee that the Department of Public Welfare already has standards by which psychiatric institutions and units of general hospitals are recognized and qualified, and the Commission might well work with this as a basis for certification.

It was the opinion of the committee that this change in the Narcotic Law is desirable, and the committee recommends that the ISMS work with the Commission to develop a plan whereby addicts may be treated in qualified private institutions.

The "search and seizure and penalty" (Section 23 of the Law) was discussed, especially the wording of this section and the penalty imposed. The Committee voiced objection to the phrase "without a warrant" but it was pointed out by the Commission that this same phraseology has existed in the Illinois law since 1937, and that so far as is known, it has not resulted in a single case concerning any physician; that this section of the law pertains primarily to the transportation of illegal narcotics; and that the section is in basic conformity with the federal law. The Commission further pointed out that this paragraph limits search and seizure activities to officers and employees of the Division, and does

not give this authority to police officers or deputy sheriffs. They further stated that without the phrase "without a warrant" in the law, many of the Division's activities relative to shipment and distribution of illegal narcotics would be hampered seriously.

After prolonged discussion, the Committee felt that since this paragraph is not specifically applicable to a physician in the legal use of narcotics, and since it imposes no undue hardship or hazard on him, there is no basic reason for it to be changed. The Committee recommends, however, that the last portion of the paragraph, dealing with license revocation, be removed.

The Commission proposes to alter the current law by specifying that the prescribing of Class A narcotics in hospitals for hospitalized patients be accomplished by the writing of such orders on the hospital sheet. This procedure has been in use since the start of the present law, it being accomplished through the rules and regulations worked out by the Division and the Committee.

The Commission proposes to introduce legislation specifying a penalty of from one to three years' confinement for the unlawful taking, use, or possession of the official Class A prescription forms.

The committee suggested that the Commission might consider the personalizing of the official forms by imprinting thereon the name and address of the physician to whom they are issued.

The Committee considered and discussed the resolution submitted by the Sangamon County Medical Society, and also by other county societies. It was the opinion of the committee that the majority of the suggestions and changes called for by the resolution were already in the process of being accomplished, and that additional progress would be made in the treatment of the addict and instituted by both the Department of Public Welfare and private institutions qualified to treat the addict, as medical science advances and better treatment becomes available.

MOTION: (Fullerton-Piszcsek) that the report be accepted. Motion carried.

Committee on nursing

Dr. Schowengerdt reported that the Committee on Nursing had met and considered the Belleville Junior College program. The commit-

tee feels that a meeting with the dean would be of assistance to learn exactly how the program is handled.

The committee recommends that the Society endorse the bill that would give the hospitals a subsidy of \$400 per year per student nurse—a subsidy bill which we have not endorsed in the past. If state funds are not available, federal assistance may result.

Department of public health

Dr. Cross, Director of the Department of Public Health reported on several bills of considerable interest to the Department which will be introduced. (1) The Atomic Power Investigating Commission intends to introduce a bill to be known as the Radiation Protection Act. (2) On the recommendation of the State Advisory Board on Necropsy Service to Coroners (of which Dr. Hirsch is chairman) a bill will be introduced to establish a toxicological laboratory in the Department. It proposes an appropriation of \$200,000. (3) An amendment has been proposed to the State Tuberculosis Sanitarium law which would authorize cancellation of charges against local governmental units that are entitled to subsidy payments and are indebted to the State for sanitarium service. (4) A bill to clarify access to official birth and death records may be introduced as an amendment to the present law.

Dr. DuPuy discussed the present birth certificates and the advisability of a society committee meeting with representatives of the division of vital statistics. By Council action the Chairman was authorized to appoint such a committee. Dr. Montgomery announced the personnel as follows: Newton DuPuy, Chairman, Jacob E. Reisch, and H. Close Hesseltine.

Committee on industrial health

Dr. Richard J. Bennett reported that his Committee had met January 20 with representatives of many interested groups. This group considered the question of workmen's compensation in Illinois. Research and meetings have brought out the fact that it would be impractical for the ISMS to introduce amendments to the Workmen's Compensation Act to obtain: (1) A physician as commissioner; (2) Two physicians on the State Council, and (3) Impartial Medical Testimony.

The one piece of legislation that has a good chance of being accepted would be to request a

Medical Advisory Committee of five physicians who would meet once a month at no salary, and would make recommendations to the chairman of the Industrial Commission on matters brought to its attention with reference to medical problems only.

The members of the society committee, over a period of time, have talked to about 50 judges, 100 lawyers, and about 200 physicians about impartial medical testimony. Based upon the above information, the committee recommends that two recommendations be presented for approval:

(1) Pertaining to introducing legislation for an amendment to the Workmen's Compensation Act for a Medical Advisory Committee of five physicians.

(2) With reference to appointing a committee to select and set up Panels of Experts to be used in Federal and State Courts and for the Workmen's Compensation Commission.

These panels of experts will be available when they are requested to serve, and must be composed of men whose opinions are based upon extensive knowledge in the specialty involved. Their word must be unquestioned and they must function at each request. Dr. Hopkins suggested working with the deans of the medical schools, the ISMS, the CMS, and the Institute of Medicine to develop these panels.

MOTION: (DuPuy-Goodyear) that Dr. Bennett proceed with his work, and that the recommendations made by his committee receive the approval and endorsement of the Council. Motion carried.

Postgraduate medical education

Dr. Limarzi reported that the following postgraduate conferences are being set up: Olney on March 26; a panel on cancer at Mattoon on April 2; a panel on diabetes at Waukegan on April 8; and a miscellaneous program at Centralia on April 16. Lincoln has asked for a conference on March 19 but has not submitted its program requests.

MOTION: (Endres-Fullerton) that the suggested 15 minute health talks beginning in February over WJJD, Chicago, be approved, and that the Committee on Postgraduate Medical Education and Scientific Service assist in this work. Motion carried.

MOTION: (English-DuPuy) that a representative of the ISMS be sent to the AMA 14th Na-

tional Conference on Rural Health to be held at the Broadview Hotel, Wichita, Kansas on March 5-7. Motion carried.

MOTION: (Hamilton-Piszcsek) that Mr. Oblinger represent the Society at the regional medicolegal conference planned by the AMA for Cleveland, Ohio, on April 3-4. Motion carried.

MOTION: (Hesseltine-Hamilton) that Dr. Richard J. Bennett represent the Society at the 1959 National Health Forum, Chicago, Palmer House, March 17-19. Motion carried.

MOTION: (Piszcsek-Fullerton) that the following candidates for Emeritus and Retired Membership be approved. Motion carried.

EMERITUS: Apfelbach, George L., 6118 Sheridan Road, Chicago, CMS; Burket, Walter C., 1020 Lake Shore Dr., Chicago, CMS; Kaufmann, Gustav L., 2440 Lake View Ave., Chicago, CMS; Parker, William G., 1002 Main St., Mt. Vernon, Jefferson-Hamilton; Pearsall, Phebe P. Block, 1630 Fifth Ave., Moline, Rock Island; Petty, Ray H., 311 North Clay, Mt. Carroll, Carroll County.

RETIRED: Metzger, Hermann L., 6747 Bennett Ave., Chicago, CMS; Perlstein, Samuel, 1350 Lake Shore Dr., Chicago, CMS; Singer, Louis G., 520 South Burnside Ave.; Apt. 9J, Los Angeles, Calif., CMS.

Constitution and bylaws

Dr. Joseph O'Neill as chairman of the special Council committee, reported that the group was studying the proposed change in the constitution and bylaws presented by Winnebago County at the 1958 meetings of the House, as it pertained to the tenure of office of Councilors. The committee has written to all surrounding states, and also to several of the larger states to see how this matter is handled. The larger states contacted are California, New York, and Pennsylvania. On December 15 a letter was sent to all Councilors asking that each Councilor poll the delegates in his district for an expression of opinion relative to this question. We hope to have a detailed report for the March 8th meeting, and we hope all delegates to the meetings of the 1959 House of Delegates will be informed of the proposed change in the constitution and bylaws, and will have an opportunity to express the thinking of each county medical society.

The resolution pertaining to the reorganiza-

tion of the Committee on Medical Service and Public Relations also is being studied and a special meeting will be held to go over the proposed changes carefully. We urge all Councilors to express the opinions of the county societies in their districts, and to keep the committee accurately informed.

Polio immunization for 1959

Dr. Reichert stated that the problem of polio immunization has not been solved; that much of the population is still without protection, and before the next polio season arrives, a campaign should be conducted to bring as large a segment of the population of Illinois within the safe limits provided by vaccination as soon as possible.

Dr. Reichert introduced Dr. Harry L. Faulkner, president of the Illinois Chapter, American Academy of Pediatrics, who spoke to the Council relative to the situation, and presented statistics available to the Academy.

NOTE: This material is not presented here as it appears elsewhere in the March issue of the Illinois Medical Journal in editorial form.

MOTION: (Reichert-O'Neill) that the Council sponsor a program for immediate vaccination against polio in accordance with the actions taken by the AMA House of Delegates as follows:

1. Each physician assumes the responsibility for making certain, whenever possible, that all members of families he serves receive protection against poliomyelitis by having the full three doses of polio vaccine.

2. State medical societies arrange with state health departments for a joint effort to bring together county medical society representatives and representatives of county and city health departments for the purpose of discussing the need for joint study committees at the local level to survey the problems which may exist and work jointly to solve them.

3. County medical societies meet with county and local health department representatives to create study committees to survey the problem of immunization as it may exist in the local area and develop and implement a satisfactory program to meet the local situation.

That this action consist of:

1. Publishing in the Illinois Medical Journal this motion, together with the facts on the present status of polio as given by Dr. Faulkner;

2. In notifying the secretary of each county medical society of the action of the Council, and instructing the secretary to work out the details of the local program on the basis of facilities available within his county.

Motion carried.

Discussion of the statewide alert followed with regard to informing the individual physician.

MOTION: (English-Reichert) that a letter be sent to every physician in Illinois giving him this information; and that another letter be sent to county medical society officers outlining local activity. Motion carried.

Dr. English stated that the University of Illinois has prepared a booklet on the management of emergencies that will be sent to every licensed hospital in the state if such a request is made to Dr. Warren Cole.

MOTION: (English-Goodyear) that such a request be sent to Dr. Cole. Motion carried.

Directory of licensed physicians

Mr. Neal called the attention of the Council to the fact that the new directory of registered physicians has been completed by the Department of Registration and Education and is now available. The department is mailing the directory to the state and county medical society officers and to all county clerks. If a physician's name does not appear, a letter to the Department will give current information. No additional supplements will be printed, but a new directory will be published each year.

The Council adjourned at 11:45 a.m.

Respectfully submitted,

HAROLD M. CAMP, M.D., Secretary

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Teamwork

Man, after something like 500,000 precarious years on this planet, has now succeeded in grasping firmly the reins of his own destiny. With this development come awesome responsibilities, in which no group shares to a greater extent than does the medical profession, unless it be the nuclear physicist, whose dawning appreciation of what he has done is so forcibly presented in Snow's novel, "The New Men." Who of us has not with pride identified himself with Sir Luke Filde's wonderful portrait of a physician keeping lonely vigil by the bedside of sick child? The physician's devotion to the individual patient is still unchallenged in a world of rapidly chang-

ing values. But, with signs that the human species as a whole may be confronted with medical problems no less serious than those of the child in Filde's portrait, who in this time of transition is keeping similar vigil over the species? We are all familiar with the complex apparatus of modern medicine, which briskly and efficiently swings into action when a patient with congenital heart disease enters the hospital for surgery, or a patient with an acute renal shutdown comes in for dialysis. But, in our concern for the individual, have we forgotten to set up the team that has as its concern the species as a whole? *James V. Neel, M.D. Medicine's Genetic Horizons. Ann. Int. Med., Aug. 1958.*

CORRESPONDENCE



Symposium on cancer in Chicago, April 16-18

The 18th Symposium on Cancer, sponsored by the American Cancer Society, Illinois Division, in conjunction with the Illinois State Medical Society, will be held in Chicago, April 16-18.

The symposium will place emphasis on early diagnosis and treatment and will consist of lectures, conferences and clinics.

The program follows:

Wednesday, April 16, morning at Northwestern University Medical School: "Tumors of the Lung and Mediastinum," Dr. Jerome R. Head; "Tumors of the Breast," Dr. T. Howard Clarke; "Tumors of the Kidney and Ureters," Dr. V. J. O'Connor; afternoon at University of Illinois: "Cancer of the Esophagus and Stomach," Dr. Gerald O. McDonald; "Tumors of the Larynx," Dr. Paul Holinger; "Carcinoma of the Lip and Jaw — Tumors of the Neck," Dr. Harry W. Southwick.

Thursday, April 17, morning at Mercy Hospital, Stritch School of Medicine of Loyola University: "Biopsy and Papanicolaou Smear," Dr. Charles J. Smith; "Carcinoma of the Female Pelvis," Dr. Herbert E. Schmitz; afternoon at Michael Reese Hospital: "Malignant Tumors of the Skin," Dr. A. M. Buchholz; "Carcinoma of the Colon and Rectum," Dr. Nathan Crohn; "Radiation Therapy of Malignant Tumors of the Breast and Cervix Uteri," Dr. Erich M. Uhlmann.

Friday, April 18, morning at University of Chicago Medical School: "Frontiers in the Use of Isotopes," Dr. Paul V. Harper; "Malignant Tumors of the Skeletal System," Dr. C. Howard Hatcher; "Cancer of the Bladder and Prostate," Dr. Cornelius W. Vermeulen; "Tumors of the Central Nervous System," Dr. John F. Mullen; demonstration of the Van de Graff generator, cobalt source, and linear accelerator, Dr. James W. J. Carpender.

Information may be had by writing to Dr. John A. Rogers, executive director, American Cancer Society, Illinois Division, 139 North Clark Street, Chicago 2.

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Clinics for crippled children listed for April

Twenty-four clinics for Illinois' physically handicapped children have been scheduled for April by the University of Illinois, Division of Services for Crippled Children. The Division will count eighteen general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical, social, and nursing service. There will be two special clinics for children with cardiac conditions, two for children with rheumatic fever, and two for cerebral palsied children.

Clinics are held by the Division in co-operation with local medical and health organizations, both public and private. Clinicians are selected among

private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

April 1 — Alton (Rheumatic Fever), Alton Memorial Hospital

April 1 — Hinsdale, Hinsdale Sanitarium

April 2 — Cairo, Public Health Building

April 2 — Flora, Clay County Hospital

April 3 — Chicago Heights (Cardiac), St. James Hospital

April 8 — Carrollton, First Baptist Church

April 9 — Springfield, St. John's Hospital

April 10 — Evanston, St. Francis Hospital

April 14 — East St. Louis, St. Mary's Hospital

April 14 — Peoria, Children's Hospital

April 14 — Quincy, Blessing Hospital

April 15 — Chicago Heights (General), St. James Hospital

April 16 — Elmhurst (Cardiac), Memorial Hospital of DuPage County

April 16 — Rockford, Rockford Memorial Hospital

April 16 — Watseka, American Legion Hall

April 21 — Belleville, St. Elizabeth's Hospital

April 21 — Danville, Lake View Hospital

April 22 — Elgin, Sherman Hospital

April 22 — Springfield (Cerebral Palsy), Memorial Hospital

April 23 — Bloomington a.m. (General), p.m. (Cerebral Palsy), St. Joseph's Hospital

April 23 — Mt. Vernon, Masonic Temple

April 28 — Effingham (Rheumatic Fever), St. Anthony Hospital

April 28 — Peoria, Children's Hospital

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Western cancer meeting

The annual Rocky Mountain Cancer Conference will be held in the Brown Palace Hotel, Denver, July 22-23. Guest speakers of national reputation will be on the program. A block of rooms at the hotel has been set aside on a first-come, first-served basis.

The conference will be sponsored by the Colorado State Medical Society and the Colorado Division of the American Cancer Society. Information may be had by writing to the Colorado State Medical Society, 835 Republic Building, Denver 2.

Proctology convention

The 11th annual convention of the International Academy of Proctology will be held in New York, April 5-9. The speakers will include specialists from the United States and foreign countries. Information may be had by writing to Dr. Alfred C. Cantor, executive secretary, 147-41 Sanford Avenue, Flushing 55, Long Island, N. Y.

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Nuclear medicine meeting

The 6th annual meeting of the Society of Nuclear Medicine will be held at the Palmer House, Chicago, June 18-20. For information, write to the Society, 750 North Michigan Avenue, Chicago 11.

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Symposium on VD

The 10th annual Symposium on Recent Advances in the Study of Venereal Diseases will be held at the Johns Hopkins Hospital, Baltimore, April 27-28. It is open to physicians and workers in allied fields interested in venereal diseases. The symposium is sponsored by the American Venereal Disease Association and the U. S. Public Health Service.

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AMA medicolegal meetings

The AMA will sponsor three regional medicolegal meetings this spring: Washington, March 20-21; Cleveland, April 3-4; Salt Lake City, April 17-18.

The program will include such subjects as medical and legal problems involved in narcotic addiction, traumatic neurosis, the approach of medicine and the law to contingent fees, *res ipsa loquitur* in professional liability cases, impartial medical testimony, and the classical method of examining an expert medical witness.

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Ophthalmology fellowships

Six additional fellowships for residents in ophthalmology will be awarded July 1 by the Guild of Prescription Opticians of America, Inc. Each fellowship is for \$1,800, payable in monthly stipends over three years of residency. Information may be had by writing to the Guild, 110 East 23rd Street, New York 10.

Gastroenterology award

The American College of Gastroenterology has established an award for the best unpublished paper on research in gastroenterology or an allied field. The winning entry will receive \$750 plus \$250 for traveling expenses to present the paper at the annual meeting of the College in Los Angeles in September. Information may be had from the American College of Gastroenterology, 33 West 60th Street, New York 23.

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ICS meeting in Chicago

The 24th annual Congress of the North American Federation, International College of Surgeons, will be held in Chicago, September 13-17. The federation is composed of the United States, Canadian, Mexican, and Central American Sections. Write to the Secretariat, International College of Surgeons, 1516 Lake Shore Drive, Chicago 10, for information.

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Medical officers needed

Federal agencies have a wide variety of openings for medical officers, with salaries ranging from \$7,510 to \$12,770 a year. A brief description of the work and application forms may be obtained from the United States Civil Service Commission, Washington 25.

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Chest physicians to meet

The American College of Chest Physicians will hold its silver anniversary meeting at Atlantic City, June 3-7. The program will include papers, symposia, round table luncheon discussions, postgraduate seminars, and motion pictures.

Write to the American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, for further information.

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Oregon cancer conference

The Oregon State Medical Society, the Oregon Division of the American Cancer Society, the University of Oregon Medical School, and the Oregon Academy of General Practice will sponsor a cancer conference in Portland, July 16-17. There will be presentations by guest speakers from other parts of the country. A program may

be had by writing to Mr. Roscoe K. Miller, executive secretary, Oregon State Medical Society, 1115 S. W. Taylor Street, Portland 5, Ore.

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Pediatric refresher courses

The Children's Hospital of Philadelphia and the Graduate School of Medicine, University of Pennsylvania, will offer refresher courses as follows: "Pediatric Advances," May 25-29; "Practical Pediatric Hematology," June 1-5. Inquiries should be addressed to Dr. Irving J. Wolman, Children's Hospital, 1740 Bainbridge Street, Philadelphia.

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O. & G. examinations

The American Board of Obstetrics and Gynecology will conduct oral and clinical examinations at the Edgewater Beach Hotel, Chicago, May 8-19. The deadline date for the receipt of new and reopened applications for 1960 examinations is August 1, 1959. Write to Dr. Robert L. Faulkner, 2105 Adelbert Road, Cleveland 6, for information.

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Clinical pathology course

The Frank E. Bunts Education Institute, affiliated with the Cleveland Clinic Foundation, in conjunction with the Cleveland Society of Pathologists will offer a postgraduate course in clinical pathology in Cleveland, April 2-3. Information may be had from the Institute, 2020 East 93rd Street, Cleveland 6.

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Goiter meeting in Chicago

The American Goiter Association will hold its annual meeting at the Drake Hotel, Chicago, April 30-May 2. There will be papers and discussions dealing with the thyroid gland, its physiology, pharmacology, pathology, and therapy. Information may be had from the Society's secretary, Dr. John C. McClintock, 149½ Washington Avenue, Albany 10, N. Y.

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AAPS meeting in Texas

The Association of American Physicians and Surgeons will hold its annual meeting in Fort Worth, April 2-4.

Our civic duties

I think physicians should stop being afraid to speak out in public. Official government statistics tell us that there are some 5,000 chambers of commerce and some 10,000 luncheon and service clubs in America. There are thousands of voluntary and public groups of various types. One would assume that the average physician must belong to many of these different organizations. If so, it would seem that the physician would be highly informed on many facts of our political life and some of the special needs in the public health field. It would seem that by his very presence in these groups he should occasionally be so frightened or angry—or even so patriotic—to have long since roused himself in protection of his profession and his family and the public health from some of the threats that make their appearance there.

What's wrong? Why hasn't he? Perhaps the answer can be found in a survey that one state medical association conducted among its members as to their participation in public and civic affairs. Among other things the survey revealed that only 26 out of every 100 physicians belong to a chamber of commerce. Only 33 out of every 100 physicians were members of Kiwanis, Optimists, Elks, Rotary, or Lions. And only 15 out of every 100 physicians were serving on a board of health, board of education, as coroner, on the county board, county health committee, county public welfare committee, a city council or village board, or as mayor or alderman. Do these sound like the statistics of community leadership for which the medical profession has so great a reputation? *E. L. Bernhart, M.D. Drought in the Grass Roots. J.M.A. Alabama, Dec. 1958.*

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A cancer commission

A cancer commission could, at the state or local level, investigate new or notorious cancer remedies, publish their findings, and proceed according to the facts ascertained. If something apparently worthwhile materializes, the profession will be the first to study it—as it did in the case of insulin, the sulfa drugs, penicillin, and other now established agents. If, on the other hand, nothing worthwhile is disclosed, then the profession and the public should be informed. *L. H. Garland, M.B. The Pursuit of the Unorthodox. J. Michigan M. Soc. Apr. 1958.*

Postoperative diet

In the immediate postoperative period — for the first 24 to 48 hours after operation — there is inhibition of upper gastrointestinal secretions. After a brief period, these gastrointestinal secretions return to normal composition and normal volume. This is coincident with the return of gastrointestinal peristaltic activity as evidenced by the clinical examination. Since the secretions of the stomach, duodenum, pancreas, and biliary system total many liters a day, the internal secretion and reabsorption of these materials actually impose a greater physiologic burden on a gastrointestinal tract functionally than does any oral intake customarily given in the immediate postoperative period. It is well known also, that by the time ingested material is ready for evacuation from the stomach or the upper gastrointestinal tract, it is essentially a thick, smooth, homogenate of material with no coarse particulation. The adequate stimulus for at least part of the evacuating mechanism of the stomach is the provision of solid material, since it has been shown that a stomach may be distended even up to the point of rupture by liquid material without showing any change in intragastric pressure. It seems evident that the plan of providing patients with liquid material for the first two or three days of a postoperative feeding program is an erroneous conception of safety and a faulty interpretation of an adequate stimulus for gastric digestion and emptying. A complete re-evaluation of the nutritional adequacy of feeding after surgery seems indicated. *Mark A. Hayes, M.D. Postoperative Diet Therapy. J. Am. Dietet. A. Jan. 1959.*

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Aspirin poisoning

An evaluation of the influence of candy medication on non-fatal aspirin poisoning is difficult. Data from the Chicago Poison Control Center indicates that, of the first 500 cases reported to the center, 84 were due to aspirin. Flavored "baby" aspirin was directly cited in 73 of the 84 cases — 14.5 per cent of the total cases received by the center and 87 per cent of the cases associated with aspirin ingestion. *R. A. Driver, M.D. Aspirin Poisoning in Children. J. Kansas M. Soc. June 1958.*

THE P. R. PAGE

John A. Mirt



Legislative battles on two fronts

Teamwork — which will require the united efforts of physicians, Woman's Auxiliary, medical personnel, and enlightened patients — will be necessary to protect the public against legislative moves that threaten the high quality of medical service being provided today.

This was the consensus at a legislative meeting, February 1, in the Hotel Sherman, Chicago, sponsored by the Committee on Medical Service and Public Relations of the Illinois State Medical Society. The meeting was attended by ISMS officers and councilors, county medical society officials and legislative chairmen from all parts of the state, Auxiliary representatives, and officers of medical assistants groups.

The medical profession this year is faced with threats on two fronts — Washington and Springfield. Legislators at the state and national levels in the first half of this year will consider numerous measures that will have a big bearing on the quality of medical care. Some bills will be good, others bad, from the public's standpoint.

It will be up to medicine to scan carefully all measures that concern health and to carry on an aggressive public education campaign for or against, as the case may require. Opinion must be mobilized, and legislators in Springfield and in Washington made aware of the thinking at the grass roots. There has been too much lethargy in the past. Continued complacency will mean more steps toward socialized medicine.

From representatives of the AMA, the legis-

lative meeting learned that the principal threats in Washington are:

(1) A bill of the Forand type that will add social security beneficiaries to the already large group receiving federal medical care. This can be stopped only by offering a health insurance program covering the aged that will provide medical care at rates within the means of those over 65. The AMA and state societies all over the country already are working to develop something of that nature. The movement must be accelerated.

(2) Medicare will be the basis for an attempt in another direction to provide federal medical care. The appropriation in the current fiscal year for the treatment of dependents of service men through civilian sources was cut back to a level \$21 million under expected requirements. This means more shifting of patients to military establishments, transfer of funds from other accounts, or deficiency appropriations.

(3) Service men's organizations are hard at work plugging for greater use of VA facilities for nonservice connected disabilities. The volume of this type of socialized medicine already is huge.

(4) It is quite possible that a federal employees health insurance program will be worked out, with the government carrying at least half the load. How this plan will be operated will have an important bearing on medicine.

(5) The so-called "doctor's draft" will expire on June 30. What the terms of an extension will

be is of utmost interest to the profession.

On the constructive side, the possible developments are:

(1) Legislation of the Jenkins-Keogh Bill type to encourage the establishments of pension plans by the self-employed. The measure passed the House last year, but became bogged down in the Senate. Prospects are more hopeful this year.

(2) Possible federal grants to medical schools. If this can be worked out through grants with no strings attached, medical education would be given a boost.

(3) The extension of the Hill-Burton hospital construction program to nursing homes is being urged by the AMA. Support in Congress may be given.

At the state level, the most important pending program is a revision of the Medical Practice Act to provide better protection for the public. An interim commission has been hearing suggested amendments, and will submit recommendations to the Legislature. Illinois medicine has proposed a strengthening of the regulations against unlicensed medical practice by providing injunction powers to the courts and increased penalties. The foreign medical graduate problem also must be faced.

An example of constructive legislation proposed by the Illinois State Medical Society is House Bill No. 6. This would make anatomical material available through wills.

Among other constructive suggestions made by the state society are: (1) to amend the Workmen's Compensation Act so as to provide for the appointment of a medical advisory committee to the Industrial Commission; (2) to make patient-physician relationships privileged; (3) to eliminate the "bugs" which have developed in the Narcotics Control Act; (4) to correct the abuses in the subpoenaing of expert medical witnesses.

To obtain the enactment of helpful legislation and to combat effectively the measures which are a threat to the practice of medicine will require an energetic campaign from the grass roots up. This will mean that the individual physician must find time to devote to legislative matters; that the wives must carry the messages into every home in their community; that medical assistants must work hard to see that their friends are properly informed; and that patients must be

made aware of how they will be affected by pending legislation.

Most important of all, the views of these people must be made known to legislators in Springfield and in Washington. This is no longer a "crash" program, but a long term project.

A blue print for this legislative action has been prepared for the Committee on Medical Service and Public Relations of the Illinois State Medical Society by Mr. Walter L. Oblinger, associate counsel. A copy of this "Legislative Manual for Committee Chairmen of County Medical Societies" may be had by writing to the Illinois State Medical Society, Monmouth, Illinois. Every person who has the health welfare of the public and the interests of the medical profession at heart should have a copy of this manual. It shows how to achieve results.

The AMA has reorganized its Washington bureau to carry on a long range program. This will reach all the way back to the county level. Field service will be provided.

In Illinois, forces are being mustered. The state society will carry on a broad educational program. Former State Senator Albert Scott of Canton, Illinois, has been employed as an associate counsel.

All these preparations will go for naught unless the individual physician, his family, his friends, and his patients are willing to give time and effort at the home level. In the final analysis, the future is up to the individual physician. He must be willing to be on the front line. It not only is a matter of better health care, but self survival as well.

Dr. Percy E. Hopkins, chairman of the Committee on Medical Service and Public Relations, was chairman of the legislative meeting. Other speakers were: Dr. Raleigh C. Oldfield, president of the ISMS; Dr. Walter C. Bornemeier, chairman of the Advisory Committee to the Woman's Auxiliary; Mrs. Charles W. Stigman, chairman of the Auxiliary Legislative Committee; Dr. Carl E. Clark, chairman of the Advisory Committee to the Illinois Medical Assistants Association; Mr. Warren Whyte of the AMA Law Division; Mr. John W. Neal, ISMS general counsel; Mr. Oblinger; Mr. Aubrey D. Gates, director of the AMA Division of Field Service, and Mr. Scott.

Leaflets on veterans' medical care

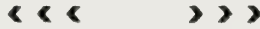
The AMA Council on Medical Service has

prepared three new leaflets explaining the medical profession's policy on veterans' medical care.

Each pamphlet covers a particular aspect of the problem. They show that the veteran loses by the continued expansion of this so-called free care and that there is an adverse effect on community medical care. The comparative cost to the taxpayer of local and VA medical

services is brought out.

The council believes that these leaflets not only are helpful to physicians who plan to address lay organizations on this subject but of interest to physicians in general who may want clarification on this matter. Copies may be obtained from the AMA Council on Medical Service, 535 North Dearborn Street, Chicago 10.



Commissural dermatitis

Commissural dermatitis, a dermatitic reaction at the corners of the mouth, is a common problem in elderly people. It has been thought that the erythema, scaling, and fissuring were manifestations of riboflavin deficiency but even with massive doses of riboflavin and other components of the B complex, the dermatitis persists. Although this type of dermatitis stems from a nutritional deficiency, the problem we are considering is not nutritional, but occurs as a result of anatomic changes in the aged. Inadequately compensated edentia, loss of elasticity, and loss of tone of buccal musculature are the anatomic changes that produce a fold at the corner of the mouth. In the presence of moisture, the two opposing skin surfaces become irritated, and an intertriginous dermatitis is produced. A seborrheic diathesis also may increase the propensity of certain old codgers to manifest this type of dermatitis. Once the inflammatory reaction is initiated, yeast and bacteria are superimposed. Treatment lies in the restoration of the anatomic defect by adequate dental prosthesis. In most instances, treatment designed to eradicate the specific infection (Mycostatin® ointment for yeast, tetracycline for bacteria) will improve the condition. In cases with a seborrheic element, a corticosteroid cream will result in dramatic improvement. *C. F. Burgoon, Jr., M.D. and J. S. Burgoon, M.D. Aging and the Cutaneous System. Geriatrics June 1958.*

The future of psychosurgery

In the past 20 years lobotomy and similar operations have been developed from crude beginnings through more and more extensive procedures — some so extensive it was found that if the patient survived he was ill-equipped to take his place in society again. While such procedures may produce occasional brilliant results in chronic schizophrenic patients, they are devastating to better preserved patients. Refinements in the matter of extent and in avoiding trauma to the cortex with its consequent danger of convulsive seizures, have made lobotomy a relatively safe operation. Observance of the proper indications and contraindications, and the proper timing of operations, has made it possible to return some 80 per cent of patients with a fixed state of tortured self-concern to a more cheerful and effective existence. When a patient is operated upon by one of the selective methods before deterioration has set in, the only personality changes that can be measured appear on the positive side of the ledger. This has been best shown in patients who were not in institutions, by Ayd, Gardner, Longo and his colleagues, and by me. With the present methods, such a rate of success cannot be attained in chronic patients in state hospitals. Nevertheless, psychosurgery may be on the threshold of another breakthrough that will bring another host of patients to better health. *W. Freeman, M.D. Psychosurgery. California Med. June 1958.*

AT THE EDITOR'S DESK



A PERENNIAL

Old stories don't die; they fade away temporarily but come alive periodically.

AP sent out a release from St. Paul, Minn., on Jan. 23, 1959 as follow:

[This is a true story. Only the names have been omitted to protect the injured.]

St. Paul, Minn., Jan. 23 (AP) — This is the story of a baby-sitter who really stuck to her job—and sat, and sat, and sat—far beyond the actual call of duty.

She was hired by a young couple in the Minneapolis suburb of Edina to watch their children while the couple attended a New Year's eve party.

In giving instructions to the 16 year old sitter, the lady of the house forgot one thing—that she had sprayed some of the bathroom equipment with a white plastic paint, the kind that “won't rub off, peel, chip, or blister. It stays on.”

Early in the evening the baby-sitter visited the bathroom. When the young couple returned at 3 a. m., they found the perplexed, red eyed sitter still sitting there.

First the mother tried turpentine in an effort to unseat the unhappy girl, but she became convinced the paint was 100 per cent as advertised.

Then she had her husband call the family doctor, who came to the house at 4 a. m. He applied alcohol with no results.

“But,” he assured the sitter cheerfully, “we'll find a way.”

Despite the discomfiture of the seated sitter, the humor of the situation gripped the doctor. He burst into a spasm of laughter, tripped over the sitter's foot and hit the bathtub, knocking himself cold.

The young husband hastily called the emergency station at the hospital and within minutes an ambulance was on the way. The driver and attendant scooped up the doctor, who had suffered a concussion.

Then, with a hearty “allyoop” the ambulance crew tore the sitter from her sitting place and trundled her and the doctor to the hospital.

Both have recovered.

Attorneys later drew up two lawsuits against the young couple—one for the sitter and one for the doctor—but the suits will never be filed, an insurance company executive said Friday. They'll be settled out of court.

“We'd love the advertising we would get,” the insurance man said. “But our concern for the parties involved is stronger.”

“It's just too embarrassing all around.”

The following story appeared in the *Lancet* more than six months ago.

Some twenty years ago, when seats were still substantially constructed in wood, a doctor and his wife went to a dance leaving their small child with a student as a sitter-in. On their return they could not find the young woman in

any of the ground floor rooms. Rushing upstairs they saw to their immense relief that the baby was sleeping peacefully; but strange noises were coming from the bathroom. The horrified doctor immediately remembered that he had varnished the seat that afternoon and had forgotten to mention it to their visitor.

When the door was burst open, it was at once clear that his fears had considerable substance. In his best professional manner, he reassured the sobbing and slightly hysterical girl and told her that her freedom was only a matter of moments. After two unsuccessful tugs he made a third very powerful heave, lost his footing, fell heavily to the floor, and broke his leg.

The situation was now serious; further professional aid was sought in the form of a plumber, who in his wisdom attempted nothing heroic but quietly unscrewed the seat. An ambulance was summoned and conveyed the doctor, the girl, and the seat to the local infirmary where they were admitted to the appropriate surgical wards.

According to an apocryphal postscript, the house surgeon felt he was too inexperienced to deal with such a complicated female case and left her for his chief's operating list in the morning. Eventually, the anaesthetized patient (seat in situ) was wheeled into the theatre, and the surgeon, turning to a postgraduate student notorious for his omniscience, said "Have you ever seen anything like this?" "Yes sir," was the reply, "Many times, but I have never seen it framed." *In England Now. Lancet Aug. 16, 1958.*

PHARMACEUTICALS

Three hundred and seventy new pharmaceuticals were introduced in 1958 (400 in 1957). There were 44 new chemical entities in the group. Ayerst, Ciba, Lilly, and Merck-S&D, each brought three new chemicals; Abbott, Lederle, Pfizer, SK&F, Squibb, Upjohn, and Wyeth had two each. Kenacort (Squibb) and Aristocort (Lederle) appear to be headed for the million dollar class.

Drs. Jean Holowach and Don L. Thurston used Diamox to treat 56 epileptic children ranging in age from 3 months to 16 years. Of the 35 who experienced complete remissions, 19 had not had an attack for from 2 to 20 months at the

time their cases were reported. Nine patients showed a 50 per cent improvement while 12 were not relieved. The rationale of the helpful effects has not been explained satisfactorily as yet.

Thioamide (alpha-ethyl thio-isonicotinamide) is a new drug with potentialities in tuberculosis treatment. It has been used on 78 patients by foreign physicians and was particularly effective in bringing about remissions. The product is believed to have its greatest value in treating cases of chronic pulmonary tuberculosis that have not responded to previous therapy when combined with isoniazid or isoniazid and streptomycin. However, the incidence of nausea and other gastrointestinal disturbances was so high, smaller doses had to be used.

Singoserp is Ciba's new antihypertensive drug. It is a unique chemical development, as the reserpine molecule is split and then rebuilt.

B. M. Parker and associates reported some interesting observations on the use of the enzyme, Varidase (Lederle), in reducing the size of valvular vegetations in experimentally produced endocarditis in dogs.

Sebulex, a new therapeutic shampoo, is marketed by Westwood Pharmaceuticals. The product is aimed specifically at itchy, scaly scalp with a tendency toward dryness. It contains a mixture of anionic surface-active cleansers and wetting agents.

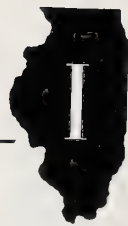
DENTAL COMFORT

The Ritter Company has designed a comfort-



able new dental chair that has been engineered to "cradle the patient in a semi-reclined position during dental procedures."

NEWS of the STATE



ADAMS

SOCIAL. The February meeting of the Adams County Medical Society was their annual social event with music by Junior Musolino and his "Cardiac Six."

COOK

MEETINGS. The February meeting of the Society of Medical History of Chicago had the following program: "Hermann Boerhaave and the Rise of Clinical Teaching", by Steven Armentrout; and "Antyllus, Surgical Genius of Antiquity," by Richard L. Grant. Both speakers are on the faculty of the School of Medicine, University of Chicago.

The February meeting of the Chicago Society of Internal Medicine was held jointly with the Scientific Section of the Chicago Heart Association. The speakers at the meeting were Drs. William B. Wartman; Emmanuel Marcus and William P. McKeever; and Peter V. Moulder, Jr.

The Chicago Neurological Society had the following program at their February meeting: "Treatment of Narcolepsy with Ritalin," by Robert E. Yoss; "Experimental Cerebral Infarction and Anticoagulant Therapy," by Jack P. Whisnant; and "A Review of Glossopharyngeal Neuralgia," by Joseph G. Rushton.

Dr. Robert E. Cooke, professor of pediatrics, Johns Hopkins Hospital, spoke on "The Effects of Sodium on the Central Nervous System," at

the February meeting of the Chicago Pediatric Society.

ANNUAL LECTURE. The annual D. J. Davis Memorial Lecture will be given at 1:00 p.m., Apr. 22, Room 221 of the Dental-Medical-Pharmacy Building of the University of Illinois, 1853 W. Polk St., Chicago. The lecture will be "The Early Development of Internal Medicine in the United States," by Dr. Lloyd G. Stevenson, professor of the history of medicine and dean of the faculty of medicine, McGill University, Montreal.

NEW POSTS. Dr. J. W. Henry has been elected medical staff president of St. Francis Hospital, Evanston, where he served as chief pathologist since 1948.

Dr. Herbert Bessinger, University of Illinois College of Medicine faculty member, was appointed director of medical education for Louis A. Weiss Memorial Hospital.

Dr. J. L. Keely has been appointed professor and chairman of the department of surgery at the Stritch School of Medicine of Loyola University. He was appointed also head of surgery at Mercy Hospital.

Dr. Jordan A. Hunt was elected medical staff president of MacNeal Memorial Hospital, Berwyn.

Dr. Herbert C. Pollack, practicing clinical roentgenologist, Chicago, has been named chairman of the art committee of the International College of Surgeons' Hall of Fame.

Dr. Edward R. Pinckney was appointed direc-

tor of the comprehensive medicine clinic at Northwestern University Medical School. He is also in charge of preventive medicine and public health teaching, and will serve as executive secretary of the committee for an integrated program for education in medicine at Northwestern.

Dr. Edmund F. Foley, professor of medicine, University of Illinois School of Medicine, was appointed president of the staff at Cook County Hospital.

SERIES OF LECTURES. Michael Reese Hospital Medical Center lists the following lectures which will conclude their present series on "The Management of Medical and Surgical Emergencies," given by their hospital staff members: Apr. 1, "Common Poisonings in Children and Adults," Arthur H. Rosenblum and Edward A. Newman; Apr. 8, "Status Asthmaticus," Milton Mosko and "Hemoptysis" and "Respiratory Failure: Mechanical Respirators," Gordon L. Snider; Apr. 15, "Massive Gastrointestinal Hemorrhage," Charles H. Lawrence and "Hepatic Coma," Mitchell A. Spellberg; Apr. 22, "Tetany, Thyroid Storm, and Addisonian Crisis," Rachmiel Levine and Morton Smith; and Apr. 29, "Acute Abdominal Emergencies," Samuel L. Goldberg and "Acute Urologic Emergencies," Irving J. Shapiro.

NEW LABORATORY. The Comdr. Eugene F. McDonald, Jr., Memorial Laboratory for Exfoliative Cytology has been established at the University of Chicago Medical Center. It was financed by leaders in the radio and television industry as a memorial to the late founder-president of Zenith Radio Corporation of Chicago. Dean Lowell D. Coggeshall said Comdr. McDonald and his friends had been interested in research seeking to expand the use of exfoliative cytology. The new laboratory includes a suite of five rooms located on the second floor of the Mothers' Aid Research Pavilion at the Chicago Lying-In Hospital on the University of Chicago campus. The laboratory is designed to make examinations for gynecological, lung, and other forms of cancer routine. The staff of cytologists works under the leadership of Dr. George L. Wied, assistant professor in the department of obstetrics and gynecology.

HONORED. Dr. John A. D. Cooper, professor of biochemistry and assistant dean of Northwestern University Medical School, had the degree of Doctor Honoris Causa conferred upon

him by the University of Brazil in recognition of the work he has done in helping to establish and equip a radioisotope laboratory in the Institute of Biophysics at the Brazilian medical school.

Awards for 30 years of service to Michael Reese Hospital's Medical Center were presented to Dr. Otto Saphir, director of the department of pathology, and Dr. Joseph Greengard, attending physician in pediatrics.

RETIREMENT. Dr. Eleanor M. Humphreys, associated with the department of pathology of the University of Chicago since 1926, has been made professor emeritus and consultant. For 11 years prior to retirement Dr. Humphreys was in charge of surgical pathology.

POSTHUMOUS AWARD. By unanimous action this month, the Board of Chancellors voted to bestow posthumously the Gold Medal of the American College of Radiology upon Dr. Warren W. Furey, who died suddenly in Chicago last November, while attending the 44th annual meeting of the Radiological Society of North America.

MEETING. Dr. William J. Grove, associate professor of surgery, University of Illinois College of Medicine, spoke on "Indications for Cardiac Surgery" at the Jan. 27 meeting of the DeKalb County Medical Society.

KNOX

MEETING. Dr. Charles B. Puestow, clinical professor of surgery, University of Illinois College of Medicine spoke on "Biliary Diseases" at the February meeting of the Knox County Medical Society.

LAKE

MEETING. Members of the Lake County Medical Society held a discussion on the free choice of physician, the closed panel systems, and social security for physicians at their February meeting.

LASALLE

MEETING. Dr. Stephen E. Reid, assistant professor of surgery, Northwestern University Medical School, spoke on "Unusual Lesions of the Right Colon" at the February meeting of the LaSalle County Society.

OGLE

NEW OFFICERS. The 1959 officers for Ogle County Medical Society are: Drs. Clyde L. Dren-

nen, president; Thomas E. Cunningham, secretary-treasurer; and L. Thomas Koritz, publicity chairman.

PEORIA

MEETING. Dr. T. R. Van Dellen, Chicago spoke on "Trials and Tribulations of a Medical Columnist," at the February meeting of the Peoria Medical Society.

RICHLAND

POSTGRADUATE MEETING. A postgraduate conference sponsored by the ISMS Postgraduate Medical Education and Scientific Service Committee will be presented at the Richland Memorial Hospital, Olney, March 26. Four members of the faculty of the University of Illinois College of Medicine will present the program.

A luncheon at the Richland County Country Club will be followed by talks at the Hospital on "Pediatric Emergencies," by Dr. Heyworth N. Sanford; "Refractory Heart Disease," by Dr. Jacob W. Fischer; "Treatment of Acute Hand Injuries," by Dr. John H. Schneewind; and "Gynecologic Sexual Deviations," by Dr. James H. McClure. There will be question and answer periods.

A fellowship hour will precede the dinner, at which the speaker will be Dr. Harlan English of Danville, councilor for the eighth district. Physicians from all surrounding counties are invited to attend.

ST. CLAIR

MEETING. Dr. Oglesby Paul, clinical associate professor of medicine at the University of Illinois College of Medicine was the speaker at the February meeting of the St. Clair County Medical Society.

SANGAMON

MEETING. Dr. William Requarth, Decatur spoke on "The Treatment of Traumatic Wounds," at the February meeting of the Sangamon County Medical Society.

VERMILION

MEETING. Mr. George C. Mahle from the Danville School Board talked briefly on the coming school bond issue at the February meeting of Vermilion County Medical Society. The speaker of the evening was Walter L. Oblinger, ISMS associate counsel whose subject was "Operation Legislation."

WASHINGTON

NEW OFFICERS. The Washington County Medical Society elected the following 1959 officers: Drs. C. W. Longwell, president; K. W. Eirich, vice president; and W. P. Plassman, secretary-treasurer.

WHITESIDE

NEW OFFICERS. Whiteside County Medical Society elected the following officers for 1959: Drs. L. J. Milcarek, president; Jack Alter, vice president; and T. E. Flynn, secretary-treasurer.

GENERAL

ACCREDITATION. The office of Governor William G. Stratton announced that Peoria State Hospital has received full accreditation by the Joint Commission on Accreditation of Hospitals. This is for one year, or until re-inspection.

Information has been received from Miss Greta Jones, researchist for Reader's Digest, that enhances Peoria State Hospital on a national scale. In preparing an article, not yet published, on the "open" hospital movement, research revealed that this was the first completely "open" hospital in the United States. It was designated an "open" hospital in 1908 under the superintendency of the late Dr. George A. Zeller. Miss Jones defined a completely "open" hospital as one having all of the wards and residential units unlocked for a period of a minimum of eight hours a day.

PUBLIC HEALTH NURSING. The School of Nursing at the Chicago Professional Colleges of the University of Illinois has been awarded full accreditation for its public health nursing program by the National League for Nursing, Department of Baccalaureate and Higher Degree Programs. Miss Emily C. Cardew, dean of the School of Nursing, said the school is one of two in the state to receive accreditation in public health nursing. The public health program consists of 12 weeks of study for senior students. They receive their training in Peoria from the city and state public health departments and the Peoria Visiting Nurses Association.

TRAUMA SECTION. The United States Section, International College of Surgeons, has formed the Section on Surgery of Trauma as a successor to the Section on Occupational Surgery. Dr. Chester C. Guy, clinical associate professor of surgery at the University of Illinois College of Medicine is chairman of the section and Dr.

N. Gillmor Long, Evanston and Chicago, is co-chairman and secretary.

A New Radio Series Over Radio Station WJJD

The Illinois State Medical Society has been invited by Radio Station WJJD to give a series of recorded radio programs as a public service presentation on the last Wednesday of each month from 6:40 p. m. to 6:55 p. m.

John L. Reichert, assistant professor of pediatrics at Northwestern University Medical School, and a member of the Chicago Board of Education, presented the first program, FEBRUARY 25, on "The Conquest of the Inexcusable Diseases."

LECTURES ARRANGED BY THE ILLINOIS STATE MEDICAL SOCIETY:

GEORGE M. CUMMINS, associate in medicine, Northwestern University Medical School, addressed the Loyola Golden Age Club of the Jewish Community Centers, March 18, on "Factors in Keeping Healthy."

LECTURES ARRANGED FOR THE ENGLEWOOD BRANCH OF THE CHICAGO MEDICAL SOCIETY:

February 3, GEORGE F. LUTTERBECK, professor of radiology, Cook County Graduate School of Medicine, "Practical Use of Radioisotopes."

March 3, ARTHUR W. FLEMING, associate professor of pediatrics, Stritch School of Medicine of Loyola University, "The Premature Infant."

April 7, HARRY A. OBERHELMAN, professor and chairman, Department of Surgery, Stritch School of Medicine of Loyola University, "Management of Carcinoma of the Colon."

PAUL R. ROSENBLUTH, clinical instructor in neurological surgery, University of Illinois College of Medicine, Stock Yards Branch of the Chicago Medical Society, April 17, on "Recent Management of Parkinson's Disease."

GEORGE E. KIRBY, Councilor of the Second District of the Illinois State Medical Society, Sheffield Woman's Club in Sheffield, April 1, on "Mental Health."

DEATHS

CORRECTION: The January issue of the Illinois Medical Journal carried an incorrect report of the death of Dr. William G. Sachse of Morris as a result of information from his county medical society. We are happy to announce that Dr. Sachse is very much alive and is still interested in a Fifty Year Club membership. We regret the error.

HANS C. ARON*, Chicago, who graduated at Friedrich—Wilhelms—Universitat Medizinische Fakultät, Berlin, Prussia, in 1908, died December 11, aged 78. He was certified by the American Board of Pediatrics.

RICHARD C. BENKENDORF*, Bushnell, who graduated at the Chicago Medical School in 1936, died January 8, aged 50. He was a member of the American College of Chest Physicians, and the American Trudeau Society.

GEORGE F. BLOUGH*, Odell, who graduated at the University of Illinois College of Medicine in 1903, died January 22, aged 87.

WILLIAM H. CUNNINGHAM*, retired, formerly of Rockford, who graduated at Chicago College of Medicine and Surgery in 1909, died recently, aged 77, at the home of his daughter in Pittsburgh.

JOSEPH NORMAN ELLIOTT*, Bloomington, who graduated at Northwestern University Medical School in 1921, died January 21, aged 64. He coached freshman football at Northwestern University during World War I, and later at Illinois Wesleyan. He was certified by the American Board of Otolaryngology.

ALLAN H. FERGUSON*, who graduated at the Hahnemann Medical College and Hospital, Chicago, in 1913, died January 19, aged 74. He was past president of the medical staff at Illinois Masonic Hospital, and assistant professor of gynecology and obstetrics at the Chicago Medical School.

WILLIAM B. FONVIELLE*, Rockford, who graduated at Howard University College of Medicine, Washington, D. C., in 1928, died December 31, aged 60. He had practiced medicine in Rockford since 1934 except for two years, from 1943 through 1945, when he served as medical officer in the United States army.

WATSON GAILEY*, Bloomington, who graduated at the University of Illinois College of Medicine in 1904, died January 19, aged 76. In 1931, at the invitation of the British army, he spent two months in northern India removing cataracts from the eyes of the natives. In 1941, he built the Gailey Eye Clinic in Bloomington. He attended the First International Congress on Corneal Transplantation of the eye in New York City in 1949, and in 1951, the Watson Gailey Eye Bank, the sixth of its kind in the United

*Indicates member of the Illinois State Medical Society.

States, was set up at Mennonite Hospital. He was a member of the American Academy of Ophthalmology, and the Chicago Ophthalmological Society.

CHARLES H. HAMILTON*, Vermont, who graduated at Eclectic Medical College, Cincinnati, in 1894, died recently, aged 91.

FRANK W. GRIFFITH*, Elgin, who graduated at the Chicago College of Medicine and Surgery in 1907, died January 19, aged 78. He was a member of the staffs at St. Joseph and Sherman hospitals in Elgin.

MILTON C. HANDELMAN*, Oak Park, who graduated at the University of Illinois College of Medicine in 1933, died February 5, in Hollywood, Fla., while on a vacation. He was 51. A member of the staff of Mount Sinai Hospital since 1937, he was also associated with the Weiss Memorial Hospital.

HENRY B. KNOWLES*, Anna, who graduated at St. Louis University School of Medicine in 1911, died January 24, aged 74. An employee of the Illinois Department of Public Welfare for 38 years, he served in the Peoria State Hospital before coming to Anna. He was superintendent of the Anna State Hospital from 1939 to 1941.

HERBERT R. KOBES*, Springfield, who graduated at Harvard Medical School, Boston, in 1930, died January 10, aged 54. He was associate professor of pediatrics at the University of Illinois College of Medicine, and Director of the Division of Services for Crippled Children at the University of Illinois.

EDMUND G. LAWLER*, Chicago, who graduated at Loyola University School of Medicine in 1925, died January 23, aged 58. He was assistant clinical professor of pediatrics at Stritch School of Medicine of Loyola University, head of the pediatric department of Little Company of Mary Hospital, a member of the American Academy of Pediatrics, and the American College of Physicians.

JACOB MYERS, retired, Sherman Oaks, Cal., formerly of Chicago, who graduated at Rush Medical College in 1905, died January 19, aged 75. Until his retirement in 1953, he was an attending physician at Woodlawn Hospital, and attending surgeon at the Spalding School for Crippled Children.

ROBERT D. PERKINS*, Moline, who graduated

at Rush Medical College in 1935, died December 31, aged 50. He was a member of the American Urological Association, and the American College of Surgeons.

DUANE W. PROBST*, Oak Park, who graduated at the University of Illinois College of Medicine in 1919, died February 3, aged 67.

JOHN H. REEVES*, Chicago, who graduated at Bennett Medical College in 1896, died January 14, aged 84. He had practiced medicine in Chicago over 60 years.

OTTO F. SEIDELMANN*, Flossmoor, who graduated at the Chicago Medical School in 1941, died January 29, aged 44. He was a member of the staff of St. James Hospital in Chicago Heights, and formerly was assistant attending ophthalmologist at Children's Memorial Hospital.

IRWIN D. SIMINSON*, retired, formerly of Chicago, who graduated at Rush Medical College in 1924, died in his home in Mineral Point, Wis., January 26, aged 64. He was former chief surgeon for the New York Central Railroad in Chicago.

JOSEPH B. SONNENSCHN*, retired, Chicago, who graduated at Rush Medical College in 1902, died January 30, aged 82. In 1906, he joined the staff of the Chicago Board of Health where he served as supervisor and clinician of the department's venereal disease control division. In 1957, the University of Chicago Medical Alumni Association honored him with a testimonial dinner for his 55 years of work in medicine.

HENNING M. SWENSON*, Chicago, who graduated at the University of Illinois College of Medicine in 1929, died January 17, aged 58. He was a member of the surgical staff of Augustana Hospital.

MATTHEW TAUBENHAUS*, Chicago, who graduated at Medizinische Fakultät der Universität, Wien, Austria, in 1928, died January 16, aged 55. He was vice chairman of the Department of Medicine and research associate at Michael Reese Hospital.

LOUIS J. TINT*, Chicago, who graduated at Jefferson Medical College of Philadelphia in 1908, died February 4, aged 80. His avocation was color photography, and he was noted for his landscape photographs of places around the world.

*Indicates member of the Illinois State Medical Society.

Angina plus

In a series of 238 patients with angina pectoris, other significant associated pathology was present in 113 (48.3%). Sixty-nine (29%) patients found at least a 50 per cent diminution of the frequency of their pain following successful treatment of the associated pathology. Nineteen patients (8%) were not improved. Twenty-five (11%) were lost to follow-up. The results of this study indicate that all patients having angina pectoris deserve thorough investigation of extracardiac factors that might be contributing to the frequency and severity of their attacks. Frequently one or more such factors can be found and corrected, and the patient's clinical condition improved even though the fundamental abnormalities in the coronary arteries are unaffected. Congestive heart failure, obesity, hypertension, and gallstones have been the most frequent of such contributing factors. *A. L. Cornish, M.D. Contributing Causes of Angina. J. Kentucky M. A. May 1958.*

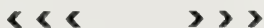
Coronary sclerosis and goiter

Postmortem findings in 250 persons who died of coronary sclerosis are compared with the findings in 250 persons who died from other causes.

Goiter was commoner, and the average weight of the thyroid was higher, in those with coronary sclerosis. Among the coronary sclerosis cases, those with goiter had a tendency to lower average age at death and a higher average heart weight. Comparison of body build showed that the 250 persons with coronary sclerosis were slightly shorter and heavier than the controls. Among those with coronary sclerosis, those with goiter were heavier than those without goiter.

These findings are correlated with observations made in Finland on the nature and distribution of endemic goiter, the iodine content of the food, and the distribution of coronary sclerosis.

It is concluded that goiter and arteriosclerosis may have a pathogenetic relationship, possibly through hypothyroidism and the overproduction of thyroid-stimulating hormone by the pituitary gland. *Unto Uotila, M.D. et al. Goiter and Arteriosclerosis. Lancet July 26, 1958.*



Hibernation

According to the theory of hibernation the life of a deeply shocked and normally homeostatic animal can be saved only by blocking the homeostatic reactions, thereby preventing the onset of extreme exhaustion. Hibernation achieves this by a multiple neural block, a controlled inhibition of the neurovegetative system. By suspending homeostasis, hibernation reverts the organism to a poikilothermic pattern. Life processes slow down. Twilight condition and hypometabolism set in. Hypothermia is an associated feature; even without cooling it will occur as a result of

hypometabolism.

Hibernation corrects vascular collapse by closing the sphincters and by eliminating the engorgement of the capillaries, of the arteriovenous anastomoses, and of the metarterioles. This mechanism is essential in treating shock by hibernation. In prevention of shock an additional advantageous feature is the reduction of the basal metabolic rate. Hypothermia by cooling also leads to a reduction of the basal metabolic rate, but it does not offer the stabilizing mechanism of the peripheral vascular circulation. *A. Strelinger, M.D. Clinical Experience with Hibernation. J. M. Soc. New Jersey June 1958.*

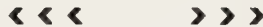
Congenital defects

A description of events during the first 12 weeks of pregnancy and of other maternal characteristics was recorded for 3,295 women at their first prenatal examination. Seventeen were found not to be pregnant, and 62 could not be traced. The remaining 3,216 pregnancies resulted in 68 spontaneous abortions, 74 stillbirths and neonatal deaths (excluding those with major congenital defects), 50 congenital defects classed as major and 72 as minor, and 2,987 apparently normal infants. There were 119 premature births (excluding those associated with major defects, multiple births, and induced labor).

Mothers of the 72 infants with minor defect and of the 119 premature infants did not differ

in any respect from the mothers of normal infants and so were included with these in subsequent comparisons.

As compared with mothers of normal infants, a higher proportion of those of infants with major defects had an acute febrile illness or pulmonary tuberculosis or had been engaged in certain types of heavy work in early pregnancy. Women who aborted also had an excess of acute febrile illnesses but not of the other factors. Stillbirths and neonatal deaths were associated with a raised incidence of acute illness, anemia, and vaginal blood loss. Mothers in all three abnormal groups had had an increased rate of fetal loss in earlier pregnancies. *A. D. McDonald, M.D. Maternal Health and Congenital Defect. New England J. Med. Apr. 17, 1958.*



Steroids in tuberculosis

The greatest difference of opinion regarding the place of steroids exists in the field of tuberculosis. Some have felt that this form of therapy is always contraindicated while others have recommended its use under certain specific circumstances. Some of the tissue damage and clinical manifestations in tuberculosis are due to an exaggerated interaction between sensitized tissue and tuberculo-protein. Corticosteroids may suppress this overactive defense mechanism with a resulting decrease in the manifestations of illness. In patients seriously ill with tuberculosis of long duration there is evidence of adreno-

cortical hypofunction. Steroid therapy used with concomitant antituberculosis chemotherapy often effects striking symptomatic improvement. Thus, without anticipating any change in the ultimate outcome, the use of steroids would appear to be justified, if only for its symptomatic effect, in patients hopelessly ill with advanced tuberculosis. In acute forms of tuberculosis associated with severe clinical illness, steroids may be helpful. This is especially true of miliary and meningeal tuberculosis. In the latter condition, prevention and relief of cerebrospinal fluid block has been attributed to steroids. *Present Status of Chemotherapy in Tuberculosis. J. Indiana M. A. June 1958.*

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Placebos in the Evaluation of Treatment in Rheumatic Diseases

EUGENE F. TRAUT, M.D., F.A.C.P.* AND EDWIN W. PASSARELLI, M.D.,** CHICAGO

Many chronic diseases, especially those characterized by inflammation, run a fluctuant course. Critical evaluation of therapy necessitates a vigilant awareness of this tendency to transient or even apparently permanent remissions. Certainly medical effectiveness has been tremendously potentiated within recent memory by anti-infective and hormonal innovations. The inducement is great to accredit some antibiotic or other drug with a happy but fortuitous remission. The coincidence — once announced or documented — tends to propagate.

Useless or mistaken prescription of innocuous substances may be condoned. Also the list of iatrogenic illnesses is increasing. Antidotes have to accompany the medication.

Medicaments and combinations of them, reputedly helpful in treating arthritis, are multiplying so rapidly and advertised with such insistence, not only the lay public but also physicians are confused. Autosuggestion and increased security following contact with a physician should and do result in faith and hope. The sequential improved physiological functioning conduces to lessened symptoms or even a kind of cure.

The available drugs constitute an ever expanding galaxy. Some of these chemicals are dignified by long use. Others only recently have been introduced but are currently accepted with considerable enthusiasm. Some of the chemicals offered to us for clinical trial after preliminary laboratory evaluation could be harmful and are only questionably beneficial.

The patients seen in the Arthritis Clinic at Cook County Hospital commonly have skeletal disease with chronicity expressed in months or years and with an unmeasured tendency to spontaneous remissions and relapses. These sufferers have been exposed to an almost unbelievable number of nostrums, cultists, chemicals, and physical agents. The application for help in our clinic could be taken as evidence of the absolute or relative ineffectiveness of their previous therapeutic adventures.

A complete medical history and physical examination are part of the first visit. Lactose 0.3 gm. is prescribed to be taken after each meal during the ensuing week of laboratory tests and the studies by consulting hospital services. No promise of improvement accompanies the tablets. At succeeding visits lessened symptoms (pain, fatigue) or findings (swelling, stiffness) result in continuance of the placebo tablets. Lack of benefit leads to a placebo injection. Failure to improve while receiving the injected placebo re-

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**Stritch School of Medicine; The Arthritis Clinic, Cook County Hospital.

sults in substitution of presumably antirheumatic drugs and procedures. During the weekly clinic interviews, care is taken to avoid rhetorical or leading questions. Equivocal or apologetic replies are classed as placebo failures. Seven rheumatologists attending the clinic independently interview and examine the patient on his return visits. We aim, in these follow-up visits, to maintain our objectivity.

DATA

Over 400 patients have been given placebo tablets. The detailed study of 303 of these patients constitutes this report. Of these, 88 patients had rheumatoid arthritis, 182 degenerative arthritis, 4 psoriatic arthritis, 11 psychogenic arthritis; and 18 had shoulder syndromes described as tendinitis, bursitis, or pericapsulitis.

Of the patients with rheumatoid arthritis, 51 received placebo tablets for four weeks or less. Thirteen (25 per cent) improved; 38 (75 per cent) were not benefited. Of the remaining 37 patients, 31 were helped continuously or progressively for two to 20 months. In all, 44 patients (50 per cent) improved.

One hundred seven of the 182 patients with degenerative arthritis received tablets for four weeks or less. Fifty one (48 per cent) improved, and 56 (52 per cent) were classed as failures. Of the remaining 75 patients, 18 were unimproved after varying periods up to eight months, and 57 improved for periods ranging from two months to two years. In other words, 108 (59 per cent) of the patients with degenerative arthritis were benefited by placebo tablets.

Approximately half of the 38 patients comprising a group with psoriatic arthritis or shoulder syndromes responded to placebo tablets. Eleven patients with psychalgia, psychogenic rheumatism, expected to respond brilliantly to placebo therapy, yielded figures comparable to those found in rheumatoid arthritis.

Those patients not responding, or ceasing to respond, to placebo in tablet form were given hypodermic injections of 1 cc. of an isotonic solution of sodium chloride at weekly visits. The placebo was injected into 39 patients with rheumatoid arthritis, 77 with degenerative arthritis, five with tendinitis, seven with psychogenic arthritis, and one with shoulder-hand syndrome.

Nineteen of the 39 patients with rheumatoid arthritis received injections for four weeks or

less. Eleven (58 per cent) failed to improve in that time and eight (42 per cent) improved. Twenty rheumatoid patients were benefited while receiving saline injections from two to 30 months. Twenty-five patients (64 per cent) not responding or ceasing to respond to placebo tablets improved while receiving placebo injections. As a total, 25 (64 per cent) of patients with rheumatoid arthritis not responding or ceasing to benefit from placebo tablets improved while receiving placebo injections.

Seventy-seven patients with degenerative arthritis were given saline injections; 36 received them for four weeks or less. Twenty-seven (75 per cent) resisted the injected placebo from the start, nine improved for less than one month, 41 continued on injections for periods of two months to 112 weeks. Of this group 44 patients (57 per cent) improved, eight for one to two years.

Thirteen of the 33 patients with psoriatic arthritis, shoulder syndromes, and psychalgia failed or ceased to respond to placebo tablets. Of this very small group of thirteen, approximately one-half were helped by placebo injections.

SUMMARY

Fifty-three per cent of all arthritis patients were relieved for significant periods by placebo tablets. Fifty-seven per cent of the remainder (27 per cent of the total) were relieved by injections of saline solution. Thus 80 per cent of 426 patients responded favorably to placebo therapy.

The propriety of using placebo medications to control *post hoc* judgments following various procedures used with therapeutic intent is established on respected precedents. Such a procedure is especially necessary to evaluate the treatment of rheumatic syndromes. Fluctuation of the clinical manifestations of the chronic forms of these diseases is axiomatic. Their principal symptom is pain, a function of the cerebrum, which is influenced by many factors. In all chronic illness, including rheumatic disorders, the psyche plays an important role, affecting favorably or unfavorably the course of the disease, even deciding its outcome or its inception.

It should be more generally appreciated that there is a placebo effect in all treatment of any conscious patient regardless of his complaint.

This is reflected in the familiar percentages and in the perennial crop of medicines.

We continue to be impressed by the placebo approach to treatment in our clinic. No longer an experiment, it has become policy. Our patients, experiencing remissions of psychic or spontaneous origin, receive placebos instead of potentially dangerous chemicals. Our use of placebo satisfied the patient's anxiety to start treatment immediately. The charting of the patient's suggestibility establishes a base line portraying how much the result following any treatment may be adjudged psychic. This is more desirable since the advent of the currently used miracle drugs given as tablets and by injection with a background of fanfare without frankly admitting their frequent failures and harmful effects.

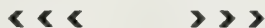
Our patients are protected against precipitous exposure to pharmaceuticals unevaluated — at least, as concerns the individual patient. Placebo tablets are given during the first week of observation — a time of tests and X-ray studies. The placebo, being neither a uricolytic agent nor a stress substance, does not interfere with such studies as the determination of serum uric acid, measurement of the sedimentation rate, or estimation of the circulating eosinophiles. If the

placebo procedures do not benefit the patient or cease to benefit him, the placebo is replaced by other measures.

The question of ethics arises in every placebo study. We consider the use of supposedly inert substances justified after listening to thousands of patients report on the negative effects of the whole roster of empirically used chemicals and procedures, many of them known to be harmful. After noting the bags, boxes, and bottles of salicylates, vitamins, sedatives, hormones, and other chemicals carried away by the average patient for years and reported by him as giving equivocal or no relief, we have felt bound to assess the value of medicine-giving in its most general sense.

CONCLUSION

The number of rheumatic patients found to benefit from placebo is about the same as the number favorably influenced by any or all of the methods of therapy reported in other studies. Placebo benefit of sufficient degree was sufficiently evident in a large enough group of patients to justify its continuance. The number of patients benefited did not seem to be essentially altered by resorting to salicylates or even to cortisone.



Cancer progress

In reviewing the progress of the profession to surround the area of cancer during the past few years, it is heartening to note that where only a short while ago the belief that early diagnosis and treatment of cancer enabled the curing of 25 per cent of those having the disease, today it is almost 33.3 per cent. If it were not for the marked increase of cancer of the

lung, the rate of cure would be greater. While this percentage may not seem adequate for what research has occurred during this period, still it is in the ascending phase and encouraging. To put it in the vernacular of baseball, what manager would not be delighted to obtain a .333 hitter to replace one whose average is .250? *W. A. Hyland, M.D. Progress in the Detection and Treatment of Cancer. J. Michigan M. Soc. Apr. 1958.*

Unsaturated Fatty Acids and Atherosclerosis

LAURANCE W. KINSELL, M.D., OAKLAND, CALIFORNIA

Public interest in atherosclerosis continues. The disease, if not actually increasing, at least is more clinically apparent. This may be due to the greater number of individuals who reach middle and old age as the result of the decreased mortality from infectious disease in the earlier periods of life.

Because of the prominence of lipids in the atherosclerotic lesion, it is natural that dietary lipids should receive much consideration — both pro and con — in the pathogenesis of the disease. Until a few years ago, it was customary in most quarters to regard dietary fat and dietary cholesterol as potentially dangerous, from the standpoint of pathogenesis of the atherosclerotic lesion. No attempt was made to differentiate the various types of fat.

Most of the data from which the above impressions were derived came from experimental animals, chiefly rabbits and chickens. Rather profound species differences might have been anticipated between these animals and man. Studies carried out in man have indicated that the ingestion of rather huge amounts of cholesterol produces no significant elevation of plasma lipids. Studies carried out in 1950 and beyond, in which qualitatively different types of fat were ingested, indicated that certain types of fat would raise the plasma lipids in humans and that other types of fat would produce the opposite effect.

These studies were originally carried out in our own laboratory, initially were disputed, but subsequently have been confirmed widely. It is now generally agreed that naturally occurring fats — in which the predominant fatty acids are saturated — raise the level of plasma cholesterol, phospholipids, and neutral fat; and that dietary fats in which the predominant fats are polyunsaturated, have the opposite effect. Oleic acid

appears to be in a more or less neutral zone. Large amounts of carbohydrate behave to some degree like oleic acid so far as cholesterol is concerned, although the level of plasma triglyceride is significantly elevated by high carbohydrate diet.

It appears, then, that essentially normal levels of plasma lipids can be achieved and maintained in the majority of individuals by the use of diets containing relatively and absolutely adequate amounts of polyunsaturated fats in the diet, assuming that the remainder of the diet is nutritionally adequate. In practice, polyunsaturated fat refers chiefly to linoleic acid.

Will such maintenance of normal lipids prevent occurrence of atherogenesis and/or produce regression of existing atherosclerosis? Several studies are under way at present designed to answer these questions. Obviously, finding the proper approach is extremely difficult. No experimental animal is known to be suitable for this study. In human subjects, all observations of the state of the blood vessels must be by indirect measurement. Consequently, measurements must be based upon statistical methods and upon long-term observation. In our experience, with particular reference to patients with partially occlusive peripheral vascular disease, the results are to some degree encouraging.

Several years must elapse, however, before anything but the most tentative sort of conclusions can be drawn. In the interim, it may be in order to consider recommendations with regard to diets that will produce plasma lipid levels approaching what might be considered normal—namely, total lipid levels of 700 or below, and total cholesterol levels of 180 or below. To achieve this it will be necessary to eliminate hydrogenated fat from the diet and to include relatively large amounts of the polyunsaturated vegetable fats, particularly corn, cottonseed, safflower, and soya. Such a diet does *not* call for the exclusion of meat, eggs, and dairy products, but does call for *moderation* and for some emphasis upon fish and fowl (particularly fish) which contain significant amounts of polyunsaturated fat.

Director, Institute for Metabolic Research, Highland-Alameda County Hospital, Oakland, Calif.

While the Nutrition Committee of the Chicago Heart Association is sponsoring this article, the opinions expressed are those of the author and do not necessarily represent the official view of that committee.

The Care of the Bladder Postoperatively Following Gynecological Surgery

THOMAS R. WILSON, M.D., URBANA

BLADDER care following gynecological surgery requires careful attention on the part of the nursing staff as well as the medical staff. A delay of one or two hours in catheterizing a patient may result in a good deal more pain and discomfort and a more prolonged hospital stay. Since the nursing staff cares entirely for the bladder of the female patients it is essential that a certain routine be followed exactly to be reasonably certain that patients are treated as the surgeon wishes. On our service we leave a relatively brief set of routine orders attached to the order sheet of every gynecological patient who has a surgical procedure necessitating an indwelling catheter. No deviation from this routine is allowed, except on written order by the surgeon. Since the adoption of this procedure, patients have obtained better care.

When a patient has an operation on or near the bladder, a considerable length of time may elapse before normal bladder function returns. The usual difficulty is inability to void. After the patient can urinate, the next difficulty is inability to empty the bladder which does not function well because of the inability to relax the sphincter, due to pain. Another possibility is lack of tone resulting from actual damage to the vesical musculature as a result of surgery. If the organ is allowed to overdistend, normal function will be delayed further. This is the basis for the rigid postoperative instructions after a bladder repair has been done.

A balloon type retention catheter is used routinely on patients who have had the following operative procedures:

1. Vaginal hysterectomy
2. Vaginal hysterectomy with rectocele repair
3. Vaginal hysterectomy with cystocele repair

4. Vaginal hysterectomy with cystocele and rectocele repair
5. Cystocele repair
6. Abdominal hysterectomy

The indwelling catheter is used routinely after abdominal hysterectomy, as a matter of convenience for the patient and for the nursing staff. About half of these patients would not require catheterization. The other half many times are made much more comfortable by the catheter. These catheters usually are removed in two to four days, depending on the patient's progress. When the patient is ambulatory enough to go to the bathroom with minimal help the catheter is removed. After removal the procedure is the same as that following removal of the indwelling catheter after bladder repair.

When a cystocele has been repaired, either alone or in combination with rectocele and vaginal hysterectomy, the major postoperative problem usually is delayed return of adequate bladder function. In our experience, the following routine helps the nursing staff understand the problem and better care is rendered to patients:

A Foley catheter, size 20-22 French, is inserted for seven days. This eliminates the need for repeated, painful catheterizations, keeps the bladder empty, and allows bladder tone to return. The catheter should not be clamped off except for brief intervals such as while the patient is taking a bath. If the Foley comes out before this period it should be immediately replaced. Patients frequently complain bitterly that the catheter is painful. The catheter is not the chief cause of the pain; discomfort is due to the operative procedure. The nurse can aid the surgeon considerably by helping make this clear to the patient. Repairs are painful and sedation should be used liberally. Patients frequently complain that the bladder feels full and there is an urge to void. When this occurs (usually during the first 24 hours after surgery), check to make certain the catheter is draining. If drainage is satisfactory, use sedation to control the urge to void.

From the Dept. of Obstetrics and Gynecology, Carle Hospital Clinic, Urbana, Ill.

Presented before the 118th Annual Meeting, Illinois State Medical Society, Chicago, May 20, 1958.

The catheter should be irrigated three times daily with some solution to remove any debris such as mucus, epithelial debris, and encrustations. The solution we use is Acriflavine® 1:5000. Three ounces are injected and allowed to flow out again. This is repeated until the return is clear.

Gantrisin® 0.5 gm. q.i.d., is given as long as catheterization is necessary. Before the indwelling catheter is removed a gram stain, culture, and sensitization test are ordered. If necessary, other specific medication is then given.

One week postoperatively, the indwelling catheter is removed. If the patient cannot urinate at all or if the amount is small, the indwelling catheter should be reinserted as soon as the patient is uncomfortable. The bladder should not be allowed to overfill (more than 400-500 cc.) because overdistention will delay further the return of good bladder function. Do not urge the patient to drink large quantities of fluids—only the usual amount should be taken. A large fluid intake does not promote micturition. On the contrary, the bladder fills so rapidly the resulting acute pain prevents urination. When the indwelling catheter is replaced, the patient is told that the catheter will be removed again for another trial in 48-72 hours. These patients need encouragement at this time. It is well to remind them that 10 to 14 days is the average period for recovery and that patients are always able to void eventually. It is wise to tell them that straining, in an effort to urinate, does not help and that when urination occurs it will do so naturally and with little effort.

If patients can void to some degree they should be catheterized twice daily, or whenever more than mild discomfort is experienced. Do not allow them to suffer unnecessarily. Encourage hot Sitz baths, as needed. Encourage them to attempt to void only when they feel the urge. Occasionally, a patient will void every few minutes in small amounts. If this occurs the bladder probably is "running over" and catheterization should be done to determine how well the bladder is emptying. If the patient is able to void but has a residual of more than 300 cc., reinsert the balloon catheter for another 48 hours, since bladder function has not progressed to a point of reasonable function. If the residual is less than 300 cc. continue to catheterize the patient twice

daily or as needed until the residual is less than 90 cc. on two successive occasions.

It is helpful to tell patients that the bladder will require several days to return to good function, but once urination and emptying have begun it does not regress. This episode of catheter removal may be the most painful and exasperating of the entire postoperative period so that sympathetic understanding, adequate sedation, and good nursing care are all important.

Occasionally, for a combination of such reasons as extensive bladder surgery, intolerance to pain, and psychic inhibition, a patient will be unable to void for a period of 14 or more days after surgery. Some of these people may be sent home with an indwelling catheter in place, with instructions to open and drain the catheter each hour during the day and each 4 hours during the night. Sending the patient home overcomes some of the psychic difficulty. She may return as an outpatient for catheter removal, or may be rehospitalized after a week at home. More than 50 per cent of patients who have an extensive bladder repair for stress incontinence and cystocele, are unable to void when the catheter is removed the first time one week after surgery. In fact, if she is able to void immediately, the surgeon may be concerned that the repair was not extensive enough.

In adjusting and maintaining an indwelling catheter, remember to anchor it firmly to the medial surface of the thigh so that excessive motion of the catheter does not occur. Excessive motion causes undue pain. However, the catheter must not be too tightly anchored. We prefer to carry the tubing under the patient's leg. It is best attached to the sheet with adhesive tape, since safety pin attachment frequently tears the sheet.

A catheterized urine specimen should be analyzed for routine culture and sensitivity each time the indwelling catheter is removed. If an organism is cultured the patient is given the indicated drug.

Many drugs have been recommended to aid bladder function. In our experience, none has been completely satisfactory. The parasympathomimetic drug we use more than any other is Urecholine chloride® in doses of 10.0 to 20.0 mg. q.i.d. The effect is prompt and lasts one to two hours. It is given if the patient has difficulty in voiding or in emptying the bladder.

Conservation of the Ovary

CLYDE L. RANDALL, M.D., BUFFALO, NEW YORK

About a year ago, an eminent Chicago specialist was in Buffalo, advocating so-called prophylactic removal of at least one ovary whenever hysterectomy was indicated. I should like to discuss some of the reasons why ovaries should not be removed when there is no ovarian pathology to indicate oöphorectomy. Removal of an ovary involves practically no risk to the patient and the procedure usually requires but the simplest of surgical technique. Few would question how the ovary should be removed but opinions vary considerably on when ovarian removal is indicated.

Indications were no problem when the risk of surgery was justified by tumors so large as to be obvious on examination. Today, however, we frequently are obliged to decide whether enlargement is sufficient to indicate pathology rather than dysfunction, when suspected dysfunction indicates ovarian resection, and when—if ever—removal of a normal ovary or ovaries seems justified.

Among gynecologists and surgeons, more agreement usually is expressed regarding indications for surgical treatment of the ovary than is evident if we review the procedures actually employed in our operating rooms. Too many operators continue to treat nonneoplastic dysfunctional cystic enlargements of the ovary as though they were really cystomas.

Even the extent of the surgery advisable, when real pathology distorts the ovary, continues to be a matter of controversy. Is ovarian removal necessary to minimize the likelihood of further disability when laparotomy seems indicated for pelvic inflammatory disease? How completely should the reproductive organs be removed when a young woman has a granulosa cell tumor, a dysgerminoma, or a teratoma apparently limited to one ovary? The most frequent question of all is:

When other pelvic surgery is indicated and the patient is approaching the climacteric, should her normal appearing ovaries be removed to prevent the possible later development of ovarian malignancy? Certainly hospital tissue committees would like to know when removal of seemingly normal ovarian tissue is justified.

Many operators are easily persuaded to remove the uterus, whenever there is any question as to the malignant or premalignant character of changes in the cervix or endometrium. But there now appears to be a growing conviction that whenever hysterectomy is advisable so-called definitive surgery also is desirable. This sort of thinking frequently results in the removal of the ovaries simply because hysterectomy is indicated. Today, with the widespread availability of cytologic methods of diagnosis, both suspected lesions of the cervix and occasionally early invasive malignancies often are recognized in relatively younger women. There is a growing appreciation of the fact that we have a real opportunity to consider the preservation of ovarian function without jeopardizing the effectiveness of surgery as the primary and total treatment for a very early, and I repeat very early, cervical cancer.

When enlargement of the ovary is evident on examination, the patient's age should be taken into consideration. Cystic dysfunctional enlargements are not likely in older women and certainly are not to be suspected after the menopause. When the woman is younger, dysfunctional cystic enlargement is more likely to be found when menstrual irregularities have been reported. The tendency of such nonneoplastic cystic ovaries to undergo spontaneous regression is well known. Re-examination after a few weeks usually is advisable before making a decision on the probable nature of these smaller cystic tumors.

When a cystic-feeling mass, no larger than 5 or 6 cm. in diameter, has been discovered in a patient under 40, this might well be regarded

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as probably dysfunctional and self-limited—at least, until additional time and re-examination suggest persistent enlargement and the probability of a true neoplasm. Even in younger women, however, when ovarian enlargement is progressive or has persisted throughout several menstrual cycles, a true neoplasm can be suspected. Laparotomy is indicated if repeated examinations suggest neoplastic enlargement of the ovary.

Careful palpation of the ovary is particularly important during pelvic examination of women after the menopause, when atrophic changes in the vaginal fornices may make the ovary difficult to outline. Any rounded or firmly elastic-feeling ovary, even no larger than a golf ball, should be regarded with apprehension. Careful re-examination under anesthesia usually is advisable with the patient prepared for laparotomy—which is indicated if the presence of even a small mass is confirmed.

We do not believe resection of relatively small cystic ovaries is advisable when the patient complains only of pain. But there are complaints that justify laparotomy for resection of the cystic dysfunctionally enlarged ovary. When the clinical criteria of certain types of dysfunction seem satisfied, splitting, wedging, or resection of cystic ovaries often proves beneficial. Usually menorrhagia accompanies anovulatory cycles. Curettage, followed by cyclically given progesterone, should prove effective. When such irregular bleeding occurs, the ovaries seem large on examination, and reveal multiple follicular or retention cysts of varying size at laparotomy, resection of such ovaries is effective. Ovarian resection in such instances should not be confused with management of the Stein-Leventhal syndrome, in which multiple follicular cysts are uniformly smaller and the patient is more likely to complain of amenorrhea, hirsutism, and infertility. The enlarged firm ovaries of the Stein-Leventhal syndrome often are palpable. Endometrial biopsy, and the discovery of endometrial hyperplasia, help confirm the diagnosis. In all instances of dysfunctional cystic enlargement of the ovaries, though specific syndromes warrant resection of ovarian tissues, complete ovarian removal certainly is not indicated. There seems no logical indication for oöphorectomy for dysfunctional cystic ovaries. We feel that tissue committees certainly should question the removal of ovaries when only dysfunctional changes are evident, but

we cannot say that resection of the ovary or the removal of normal ovarian tissue is not justified. When the criteria indicating the types of ovarian dysfunction previously noted seem to have been taken into account, simple bisection, wedging, or resection procedures often seem effective.

On the other hand, how extensive should surgery be when a true neoplasm, a dermoid, a cystadenoma, or one of the rarer but benign looking neoplasms seems to have replaced an ovary? Two possibilities should always be considered. First, we should decide when it would be permissible to attempt resection of the neoplasm from the ovary, saving any portions of ovarian tissue that seem uninvolved and adjacent to a blood supply; and second, when to remove both ovaries because of the probability of the bilateral occurrence of the tumor and eventual involvement of the opposite ovary.

When one ovary has been removed previously, and laparotomy is again indicated for enlargement of the patient's one remaining ovary, the operator usually is willing to consider or make an attempt to save a part of that one remaining ovary. Since there is always the possibility that the preserved "other" ovary eventually may develop some type of pathology, is it not evident that we might better approach the first ovary involved with the same desire to preserve ovarian tissue that we would be likely to feel were we approaching the patient's only remaining ovary?

Oöphorectomy can be accomplished quickly, and by comparison, ovarian resection looks fussy and inefficient. Ovarian resection takes more time and certainly is not the surgically neat procedure that oöphorectomy is. Nevertheless, a cyst so large as to apparently replace an ovary will sometimes be found to permit excision of the neoplasm alone with preservation of considerable ovarian tissue. The best management certainly requires prompt recognition of the type of cystoma, and knowledge of the potentialities of the neoplasm both as regards the possibilities of malignancy and its bilateral occurrence. Reported bilateral occurrences of benign cystomas vary from an incidence of 7 to 10 per cent for pseudomucinous cystadenomas, and approximately 12 per cent for dermoids, and 15 to 20 per cent for serious cystadenomas. Among women followed for longer than five years after removal of one ovary because of benign cystoma, we have to date observed

the development of a neoplasm in the remaining ovary in only five instances among more than 200 such cases.

Current concepts regarding the pathogenesis of ovarian neoplasms suggests that by the time one ovary develops a clinically evident neoplasm, the opposite ovary—particularly if at operation it shows no evidence of neoplasia on bisection—will be unlikely to develop a neoplasm later. At the time of operation, one tumor often is larger than the other, but in cases in which there is going to be bilateral occurrence, we believe that both ovaries usually will show involvement to a grossly appreciable degree at the same time. When a benign appearing cystoma seems unilateral, careful inspection, palpation, and bisection of the opposite ovary is indicated. We do not believe, however that the other ovary need be removed if it appears normal on bisection, simply because the possibility of its involvement at a later date is no more than 3 per cent.

When a cystoma appears to be typical endometriosis, it is now generally agreed that its chocolate-like content does not contain viable cells that are likely to implant and spread endometriosis if such old bloody content is spilled onto the pelvic peritoneum. Here we need not consider oöphorectomy rather than ovarian resection just in order to avoid the probability of such a spill. Dermoids, a frequent type of cystoma in younger women, can be resected safely from the ovary, usually with preservation of considerable ovarian tissue. In like manner, when a larger adenocystoma involves only one ovary, we have not observed postoperative evidence of peritoneal implantation or the accumulation of free fluid following the accidental spill of the contents of a benign cystoma at the time of operation—if extension through the capsule of the tumor and implantation onto adjacent pelvic peritoneum had not already occurred spontaneously before operation. We have observed the postoperative development of so-called pseudomyxoma peritonei but only where papillary implantation outside the capsule of the cystoma was evident the first time the abdomen was opened.

When ovarian cystomas are bilateral, however, the possibilities of malignancy are greater. Even if there should be no evidence of implantation outside the ovarian capsule when the abdomen is opened, we believe it is advisable to attempt to remove bilateral cystadenomas without rup-

ture of their capsule or spill of their content, particularly in older women.

When at operation, there is any question regarding the nature of an ovarian neoplasm, call the pathologist or a particularly interested colleague for help with a "table diagnosis." The decision regarding the extent of the surgery advisable if one of the more unusual types of ovarian tumor should be discovered ought to be based upon prompt diagnosis and knowledge of the potentialities of the growth.

There will always be differences of opinion regarding the management of younger women with a granulosa cell tumor, a dysgerminoma, or teratoma limited to one ovary. Such rarer neoplasms as the sarcomas, mesonephromas, and embryonic types of teratomas also may be observed in adolescent girls and relatively younger women. No definite rules can be made on the management of such tumors. When the growth seems well encapsulated or pedunculated, we do not feel the operator should be criticized for a conservative operation. The most radical resection may fail to prevent recurrence and death due to the neoplasm, whereas removal of only the involved ovary may be followed by a completely benign course.

Should normal looking ovaries be removed at the time of an indicated hysterectomy, simply because the ovaries may develop pathology later? This apparently growing practice at least has the distinction of expressing something unique in the surgical point of view. True, the practice of prophylactic removal of the appendix has been widely accepted as good preventive medicine but there is no appendiceal function to be taken into consideration. Those who advocate prophylactic removal of the ovaries must do so because they feel the patient is at an age when function of this tissue need not be considered.

No one to my knowledge, who advocates prophylactic oöphorectomy has taken the time or had the inclination to make certain whether the ovary performs functions essential to the individual's well being at an age when it may be no longer desirable or possible for her to bear additional children. The value of ovarian function after the menopause might seem a matter of academic interest, were it not for the fact that hysterectomy is now employed so frequently, consultation rules and tissue committees are required in approved hospitals. We must admit

that such rules, to a considerable extent, have been proposed and are being observed largely in an effort to reduce the number of hysterectomies done when indications are questionable.

Our teaching hospitals have trained many general surgeons and gynecologists to operate well and some have talked much about the evils of repeated pelvic laparotomies. One result—the philosophy of so-called definitive pelvic surgery—seems to have gained many advocates. It would be amusing, if it were not nearly tragic, to hear those convinced of the merits of leaving nothing that could give rise to an indication for another laparotomy talk as though they were promulgating a conservative trend. At times the advocate of definitive surgery seems to feel an almost smug satisfaction in the thought that there is going to be no opportunity for anyone else to re-operate his patient, simply because nearly everything has been removed that could produce an indication for another pelvic laparotomy.

What do we mean by definitive pelvic surgery? It means total hysterectomy and removal of both ovaries and tubes, and the appendix—regardless of whether the adnexa show evidence of pathology or not—the first time laparotomy is indicated. The advantage claimed can be realized only in the patient's future, but the physician can be assured that lower abdominal pain in such women cannot be due to cystic or hemorrhagic ovary, to recurring pelvic inflammation, or to the development of endometriosis. Today we see such wholesale definitive removal of the female reproductive organs whenever inflammatory disease seems to indicate laparotomy, when fibroids or bleeding indicate hysterectomy, when postmenopausal bleeding indicates curettage, when postpartum hemorrhage or the advisability of postpartum sterilization warrants consideration of hysterectomy or tubal ligation. This is not the time or the place to discuss the advisability of hysterectomy as a part of the management of any of these conditions.

We are here to object to the thought that if it is a good idea to remove the uterus for any one of these indications, it is an even better idea, and a forever to be appreciated service to your patient, to take out both tubes and both ovaries—"so that she will never again have any trouble in her pelvis." With such a growing trend, certainly it is time to give more consideration to the question: How much may the ovary

be worth to the woman after age 25, 35, or 50?

For years, references have been made to the probability of ovarian function after the menopause. No one really denies that the ovary continues to produce at least estrogens after the menopause, but the amount and significance of such postmenopausal function must vary considerably among individuals. We must also remember that ovarian removal and the withdrawal of estrogens should not be considered one and the same because the effects are not necessarily identical.

A number of reported studies indicate that the production of estrogen by so-called extrapelvic sources is not predictable, and as a result, the effects of ovarian removal are not predictable either. Since the potentialities of the extraovarian sources of estrogens in any one individual cannot be measured before operation, it is evident that the removal of any woman's ovaries may be followed by almost complete cessation of her ability to produce estrogens.

It is now evident that ovarian hormones circulate throughout the body and that—by alterations of metabolic processes distant from the reproductive tract—tissues other than those lining the uterus and vagina are affected. The so-called extrapelvic sources of estrogen seem able to protect not more than 50 per cent of apparently normal women from the possibility of atherosclerosis and osteoporosis, and from the dysfunctions and discomforts incident to the development of atrophic epithelial changes in the buccal, nasopharyngeal, and genitourinary membranes.

The world's literature now includes considerable evidence that the inability of an individual to produce estrogens, particularly during the preclimacteric and earlier postmenopausal years, may result in disabilities and even in death at an earlier than average age. Until the 1956 report of Griffith¹, many gynecologists and surgeons were not aware of the evidence that had been accumulating to suggest that estrogens seem to confer some degree of immunity to the development of arteriosclerotic changes. This literature should be considered by any operator tempted to remove apparently normal ovaries, particularly the evidence that decade by decade, the incidence of severe atherosclerosis will be significantly higher among women whose ovaries have been removed before the age of 50, when such castrated women are compared with those

of equal ages whose ovaries have been preserved.

There remains the possibility that the ovary, preserved at the time of hysterectomy, will not continue to function as well as it might had the adjacent uterus not been removed. Data previously reported² seems to indicate, that among women subjected to hysterectomy and bilateral oöphorectomy, 30 per cent more will develop objective evidences of ovarian deficiency than will be evident years later among women whose ovaries were preserved when hysterectomy was indicated. Changes due to a lack of estrogenic effects may result in discomforts and disabilities that eventually shorten life in some women. Moreover, the objective evidences of estrogen deficiency are not the only sources of complaint likely to be voiced by women whose ovaries are removed prophylactically when hysterectomy is done. Psychological, subjective consequences often produce as much apparent disability as the degrees of atrophic change that develop.

Griffith¹ seems convinced that control of artificial menopause by replacement therapy often is unsatisfactory. Recent publications suggest that elaborations of the ovary in some way contribute to both the nutrient and cardiovascular enzyme systems. Present day substitutional therapy replaces only the known estrogenic function of the ovary. When the total picture of

ovarian function is better known, Griffith seems certain we will then appreciate important reasons to preserve the ovaries when hysterectomy is indicated.

SUMMARY

The advisability of preserving the ovary might well be considered for some time to come. Before we advise women to have their ovaries removed, remember that only two generations ago, no one knew that the ovary produced estrogens. Who can at this time say that women do not need ovaries, for they now seem destined to live at least a quarter of a century of life after the menopause. At least, in our experience, surgical castration results in demonstrable changes evidencing a deficiency of estrogenic effect in 40 per cent of women within five years and in over 50 per cent of women after 10 years. It seems likely, therefore that oöphorectomy—when performed routinely whenever hysterectomy is indicated—could be contributing to the discomforts, disabilities, and eventual death of more women than now seem destined to develop malignancy of the ovary.

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Cutaneous diabetes

Ten or fifteen years ago Urbach suggested that the skin in certain diseases became overloaded with sugar. He termed this cutaneous diabetes and showed that this condition was often the predisposing cause of chronic and recurrent pyoderma, abscesses, and boils. Orinase, the new

oral antidiabetic drug, has been used with marked success in handling these conditions. Orinase gm. 0.5, one tablet twice a day, produces very nice results and is helpful in deep infected acne as well. *A. R. Woodburne, M.D. Developments in Dermatology. Nebraska M. J. July 1958.*

Current Indications for the Use of the Pump-Oxygenator in Surgery of Congenital Heart Disease

ROBERT A. MILLER, M.D., CHICAGO

Dr. Robert Miller: The indications for surgical intervention in patients with congenital heart disease are constantly changing as refinements in diagnosis, surgical technique, and experience with operated patients become available. Perhaps the most significant advance in recent years has been the development of effective and relatively safe pump-oxygenators that permit direct vision repair of congenital and acquired cardiac defects. There are no absolute indications to be rigidly used in the selection of patients for surgery using the pump-oxygenator, but rather a general pattern of indications. The following discussion concerns patients within the pediatric age group, influenced by the facilities and experience of those of us concerned with this problem at the Children's Memorial Hospital in Chicago.

Accurate information relative to the pathophysiology of cardiac abnormalities and the pulmonary vascular bed is essential for intelligent selection of patients. In most cases, careful history taking and physical examination, cardiac fluoroscopy, electrocardiography, angiocardiology, and cardiac catheterization are the studies employed. They suffice to define the location of the lesion, the direction of the shunt between the venous and systemic circulations, the magnitude of the shunt, and the estimated pulmonary vascular resistance.

The lesion most commonly operated, using the pump-oxygenator, is the ventricular septal defect. The ideal candidate is the patient with a large left to right shunt (i.e., from left ventricle to right ventricle), and a pulmonary flow at least twice the systemic blood flow, who has cardiac enlargement and symptomatology, and who has a relatively low pulmonary vascular resistance.

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It is our belief that asymptomatic children with ventricular septal defects and a heart of normal size are not candidates for open heart surgery at this time. The risk of the procedure is still considerable when compared to other surgical techniques. Moreover, in children who have had more than one cardiac catheterization it has been difficult to document instances of progressive increases in pulmonary vascular resistance secondary to left to right shunts of several years' duration. We are not in a position to say whether such increases might not occur by the time the child reaches adulthood.

The concept of pulmonary vascular resistance is critical in our evaluations. If pulmonary resistance is low, the expectation for a good surgical result is good. If calculated pulmonary vascular resistance is high, significant obstruction presumably exists in the pulmonary vessels. The patient is rarely improved following surgery and the immediate operative mortality is high. Per-

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haps the group of patients that presents the most difficult problem in judgment is that characterized by a moderate elevation in pulmonary vascular resistance, pulmonary artery pressures equal to systemic artery pressures, and large pulmonary artery blood flows. This group presents the greatest need for surgical correction. Some patients benefit strikingly from surgery, yet the operative mortality is highest. In this group patients ought to be selected whose symptoms seem to be related to the large shunt rather than to the increased pulmonary vascular resistance.

Dr. Nicholas J. Cotsonas, Jr. Associate Professor of Medicine: How important is an increased pulmonary artery pressure in considerations of operability?

Dr. Miller: The pulmonary artery pressure is not the sole factor to be considered in estimations of pulmonary vascular resistance. From the expression $\text{resistance} = \text{pressure/flow}$ it can be seen that with a large left to right shunt (and high pulmonary blood flow) the pulmonary artery pressure could rise considerably and yet the pulmonary vascular resistance would remain low. Conversely, a patient with a moderately high pulmonary artery pressure and a small shunt would have a high pulmonary vascular resistance and would be a poor surgical candidate. When evaluating surgical risk according to published mortality data it is mandatory to scan the resistance, not the pressure values.

To recapitulate, we are not advising surgery in two groups of patients: 1) those with high pulmonary vascular resistance and small left to right shunts, and 2) those with small defects and small shunts who are asymptomatic. It is conceivable that in the foreseeable future, as the operative mortality continues to fall, even asymptomatic patients with ventricular septal defects will be operated on. Early closure would prevent progression of the natural course of the disease (which is still poorly understood) and would reduce the opportunity for subacute bacterial endocarditis occurring at the site of the defect.

Dr. Ormand Julian, Associate Professor of Surgery: I would agree that when pulmonary vascular resistance is high, surgery does nothing to help the patient. Why the patient dies following the repair is not entirely clear but it is probably related to surgical trauma to an already burdened right ventricle that subsequently fails.

Dr. Irving J. Adatto, Research Assistant in Medicine: It is difficult for me to accept operating on all cases of ventricular septal defects, even with low risk surgery.

Dr. Miller: The incidence of ventricular septal defect in adults is relatively low. The more severe cases must die in childhood. I have already alluded to the prevention of subacute bacterial endocarditis.

Dr. Adatto: I would suspect that the true incidence of asymptomatic defects in adults is grossly underestimated.

Dr. Miller: Another group of patients now operated on by open heart methods is that comprising the endocardial cushion defects. The most frequent and successful operations of this group are on the interatrial septal defects of the ostium primum type (in which the lower margin of the defects extends to the atrioventricular valves). Patients with complete common atrioventricular canal should not be subjected to surgery if prior diagnosis can be established since attempts at repair are almost unsuccessful. Fortunately, there are many variations of atrioventricular canals that can be closed surgically, and complete canals are not common.

The ostium primum defect generally is associated with a cleft leaflet of the mitral valve. Diagnosis can be suspected clinically when the usual findings of atrial septal defect are associated with a systolic murmur in the region of the third intercostal space parasternally which is louder than that usually heard and which is associated with a thrill, a loud blowing murmur of mitral insufficiency at the apex (which is due to the cleft mitral leaflet), and an electrocardiogram that is quite diagnostic, showing marked left axis deviation with delayed ventricular depolarization, an R-R prime configuration in the right precordial leads, and a tall R, high T wave in the left precordial leads of the so-called diastolic overload type — electrocardiographic evidence of combined ventricular hypertrophy.

Cardiac catheterization is most helpful in confirming the diagnosis. We suspect a common atrioventricular canal when there is slight desaturation of the systemic arterial blood, a small left to right shunt, and an elevated pulmonary artery pressure equal to the aortic pressure. The patient rarely survives beyond the age of 10 years.

Dr. Harry A. Bliss, Assistant Professor of

Medicine: The differentiation of endocardial cushion defects has always been a difficult area to define. Have you catheterized any cases with ostium primum defects who had high pulmonary artery resistance?

Dr. Miller: I do not believe so, but I would have to check our records. In any case, the generalization has proved useful.

Dr. William R. McCabe, Assistant in Medicine: How common is A-V block in these conditions?

Dr. Miller: First degree A-V block is not unusual. It should be pointed out that at other institutions all atrial septal defects are now repaired using the pump oxygenator, including the ostium secundum variety (a defect high in the atrial septum away from the atrioventricular valves). These workers argue that the possible existence of anomalous pulmonary veins draining into the right atrium cannot always be excluded. We feel that careful pre-operative evaluation will show that in many patients a small atrial septal defect of the ostium secundum type is present as the only cardiac lesion and that repair under hypothermia can be done much more easily than with the pump oxygenator.

Dr. Julian: Institutions with the most surgical experience with the pump oxygenator find greater safety in its use. We believe that all atrial septal defects should be repaired, using the pump oxygenator for the following reasons. A secundum defect may be suspected pre-operatively but a primum defect is found at surgery; the secundum defect may be too large to close adequately in the five minutes of inflow occlusion permitted under conditions of hypothermia; and, the relaxed myocardium during hypothermia may give a false sense of security. Under dynamic conditions, after atrial inflow resumes, the graft may prove inadequate.

Dr. Miller: All patients with tetralogy of Fallot are now operated on, using the pump oxygenator, with the exception of very sick infants who develop cyanosis and episodes of unconsciousness during the early weeks of life. In these infants a shunt procedure—usually subclavian to pulmonary—is done to tide them over until definitive correction can be done in later

childhood. We correct isolated pulmonary valve stenosis under hypothermia, although some workers do all cases on the pump. Children with aortic stenosis in whom surgery is indicated also are presumably suitable candidates although we have had little experience as yet with this group. I have not attempted to give a complete review of all of the less frequent congenital defects that have been operated on or are potentially correctable using the pump oxygenator, nor have I mentioned acquired valvular lesions.

Dr. George Saxton, Associate Professor of Preventive Medicine: Since estimation of pulmonary vascular resistance is so critical in evaluation of operability, have you or others attempted to correlate pulmonary diffusing capacity with resistance?

Dr. Miller: Doctor David Cugel has attempted some studies on our patients with high pulmonary artery pressures, some of whom had high pulmonary flow and others had low flow and very high resistance. The correlation between the carbon monoxide diffusing capacity and the pulmonary vascular resistance was disappointing. Further refinements in technique seem needed to adapt the CO diffusing capacity procedure for use in children. More data on normal values is the prime need.

SUMMARY

The current indications for use of the pump oxygenator in cardiac surgery for congenital cardiac defects in children are presented. In general, patients with a large left to right shunt and low pulmonary vascular resistance are the best candidates. High pulmonary vascular resistance usually is a poor prognostic sign. In children with ventricular septal defects usually only those with symptoms or signs of cardiac disability are operated. Patients with ostium primum defects are ideal surgical candidates. Patients with complete common A-V canal do poorly and should not be operated on at this time. Those with atrial septal defects of the ostium secundum type are operated on exclusively on the pump by some; others still prefer to use hypothermia. Infants as a group have a relatively high mortality on the pump.



Some Uncommon Disorders of the Hair Shaft

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WITHIN the past year attention has been called by Van Scott and associates^{1,2} at the National Institutes of Health, to the fact that morphologic features of plucked scalp hairs can reflect certain general metabolic and mitotic disturbances. For example, during administration of folic acid antagonists the germinative epithelia of growing hairs may produce hair shafts of markedly reduced diameter temporarily. The resulting focal constrictions in hair diameter accurately reflect periods during which such drugs have been administered. Also, by examining the roots of a tuft of hairs plucked from the scalp and determining the proportion of growing hairs which showed dysplastic changes, a rather sensitive index could be obtained of the amount of ionizing radiation received by the scalp. As little as 50 roentgens could be detected and quantitated by this type of differential counting of hair roots as early as four days following radiation.

These observations are perhaps not too surprising when we consider that the cells of the germinative epithelium of the hair show phenomenally great mitotic and metabolic activity. Study of hair, the product of this remarkably active tissue, seems to be emerging as an important diagnostic and research tool which may parallel and in some respects even surpass the usefulness of the peripheral blood cell picture and hemopoietic tissues in assessing certain general metabolic or mitotic disturbances.

With this background of increasing interest in the hair shaft, I would like to mention briefly a few highlights about some peculiar disturbances that affect hair shafts and which have re-

ceived only scant attention. First, there are a group of literally hairsplitting disorders given names such as fragilitas crinium, trichorrhexis nodosa, and trichoptilosis. In these disorders there is longitudinal splitting of the hair shafts either at single or at multiple points in either relatively simple or brushlike fashion. It is likely that direct mechanical trauma, such as from hairpins, or injury by a variety of chemical or other physical agents may play major roles in causing hairsplitting, especially in view of the fact that these splitting changes occur also in mistreated and much used shaving brushes. Possibly, as suggested long ago, hair destroying bacteria also are responsible because similar changes follow bacterial action in stored wool. In some cases, defective hair keratinization from nutritional, toxic, or little understood metabolic disturbances may set the stage for the difficulty. In some women showing a peculiar excessive oiliness of long hairs near the scalp and extreme dryness and splitting at the ends, reduced ability of sebum to spread along the hair may play a role. In such cases, brushing of the ends of the hair with various oils can prove effective.

A number of poorly understood frequently congenital or hereditary disorders are marked by distorted hair shafts. In monilethrix there is scanty, coarse, friable hair growth together with periodic constrictions in the hair shafts to give them a beaded appearance. In pili torti, instead of beading there is periodic flattening and 180 degree twisting distortion associated with similar scanty and poor hair growth. In both disorders, which are likely to be closely related, associated follicular hyperkeratinization or keratosis pilaris is common. No effective treatment is available but sometimes a degree of spontaneous improvement is noted around the time of puberty.

In pili annulati, leucotrichia annularis, or

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ringed hair there are alternating white and pigmented bands along the hair shafts to give them a cross-striated appearance. The white zones are caused by local accumulations of gas in the hair shaft rather than by loss of pigment. This disorder is believed by some to be analogous to Beau's lines in the nails and occasionally is associated with severe debilitating illnesses.

Among uncommon causes of hypopigmentation of hair, two conditions have attracted recent interest. One occurs in the metabolic disorder, phenylpyruvic oligophrenia, in which afflicted individuals lack the enzymes required to convert the amino-acid phenylalanine into tyrosine from which melanin pigment is formed. Phenylalanine and its metabolic products other than tyrosine accumulate in these individuals who also are relatively deficient in tyrosine. Both of these factors interfere with the enzymatic process of melanin pigment formation. Restriction of dietary phenylalanine intake as well as tyrosine supplementation can restore hair pigmentation.^{3,4,5,6}

Finally, chloroquine induced depigmentation of hair has been observed especially in individuals with red or reddish blond hair. Fitzpatrick and associates⁷ have brought forth experimental evidence that chloroquine interferes with the formation of pigment derived from tryptophane and they feel that the phenomenon of chloro-

quine depigmentation strongly supports the concept that tryptophane may be the precursor of red hair pigment in man. This concept would assign red heads a unique pathway of tryptophane metabolism. Wild speculations may be made about the possibility that the popularly supposed volatility and temperament of red-heads may in some way be related to the way they metabolize tryptophane in view of the key psychopharmacologic roles played by tryptophane metabolites.

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Whiplash injury — a poor term

It is hoped that industrial physicians will agree that the term "whiplash injury" is not a diagnostic entity and that the term should not be used. If this is done, the plaintiffs' attorney will be forced to consider the facts before him based on an extension flexion injury, the amount

of calculated abrupt deceleration, the force of the blow, the amount of rear end (or in rare cases, front end) damage involved. Only then, when supported by true objective interpretations, will automobile crash injuries assume their rightful perspective. *N. Gillmor Long, M.D. Whiplash. Indust. Med. Jan. 1959.*

CASE REPORTS

Hand Injuries Due to Homemade Rockets

JOHN H. SCHNEEWIND, M.D., CHICAGO

One of the less desirable influences of this rocket era on our teen-agers has been the stimulus to devise homemade explosives. Recently, we had occasion to treat two patients suffering from hand injuries following premature detonation of homemade rocket bombs. The type of injury sustained serves to focus attention on the need for strict observance of the basic principles of treatment of all hand injuries.¹

The first case is that of a 15 year old white male who was admitted about a month after sustaining a severe injury to his left hand. The young man had devised a metal cylinder (Figure 1) into which gunpowder and tissue paper were to be packed. In the process of wadding the tissue into the cylinder, an explosion drove bits of tissue paper deep into his palm. He was taken to his local physician. X-rays revealed a fracture of the 4th metacarpal bone and the boy was taken to the operating room where debridement was performed. In spite of prompt treatment, the wound became infected and pus and small fragments of tissue paper drained from the palm. Our initial examination revealed marked swelling and tenderness with green pus draining from the wound (Figure 2). Redness and swelling

were noted on the dorsum and a fluctuant area over the 3rd and 4th metacarpal heads. The patient was unable to move the fingers.

Repeat X-rays showed the fractured 4th metacarpal in good position, with no evidence

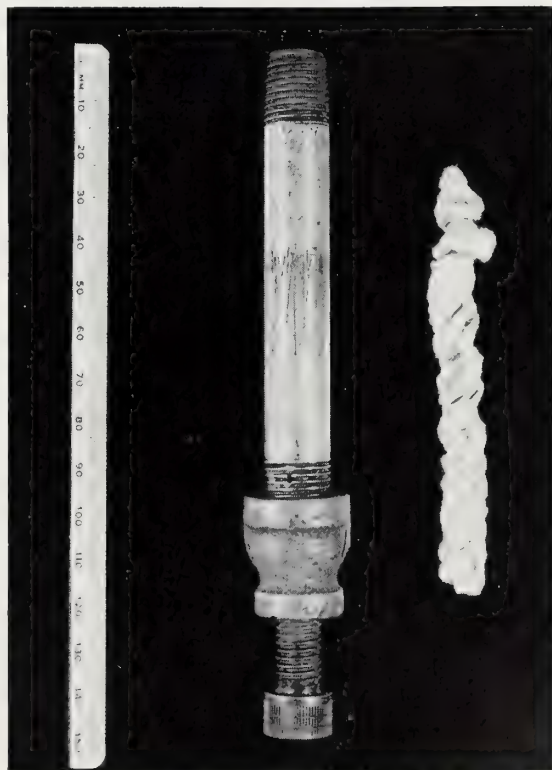


Figure 1. Homemade rocket. Premature detonation resulted in severe hand injury (Case 1).

From the Department of Surgery, University of Illinois College of Medicine, Chicago.

We are indebted to Dr. Peter J. Gilbert, West Chicago, and Dr. George J. Bordenave, Geneva, for sending us these patients.



Figure 2. Appearance of hand following injury by homemade rocket. There was swelling, tenderness, wound drainage, and marked limitation of motion.

of osteomyelitis. Culture of the pus revealed *Staphylococcus aureus*, coagulase positive, resistant to all antibiotics tested except Erythromycin®. Initial treatment consisted of continual warm wet dressings and immobilization in a position of function. The patient was given Erythromycin and tetanus toxoid... On the fourth hospital day, under general anesthesia and with a pneumatic cuff on the arm, wide debridement of the palmar wound was performed. Several bits of tissue paper were found deep in the wound. A counter incision on the dorsum was required to obtain adequate drainage.

Postoperatively, the warm wet dressings were continued. Swelling, edema, and discharge subsided gradually and 15 days after operation, the patient was taken again to the operating room where the wounds were covered with split thickness skin grafts. At the first dressing change, five days after operation, estimated a 60 per cent "take." Additional skin which had been kept sterile in the refrigerator was applied with almost a complete "take." As soon as the wounds were fairly well healed physical therapy was started to loosen the joints and increase the range of motion. The patient was discharged a month after admission; there was shortening of the ring finger but the wounds were well healed. At the time of discharge the patient lacked 1½ inches of a full clench and his grip was rather weak. It was not until five months after injury that he was able to make a fist and regain full use of the hand (Figure 3).

The second case is that of a 15 year old white male who had sustained loss of tissue and a burn of the web space between thumb and index



Figure 3. Appearance and function of hand five months after injury. The wounds healed completely. However, there was one-half inch shortening of ring finger. Grip was of normal strength.

finger of the left hand four weeks prior to admission due to explosion of a homemade rocket. Upon entry there was a limitation of flexion and extension of the thumb and index finger, anesthesia of most of the radial side of the index, and a granulating area over the second metacarpal bone (Figure 4). After several days of continual wet dressings a split skin graft was applied over the raw surfaces. Approximately 90 per cent of the graft "took" and physical therapy was begun. The patient was discharged two weeks after admission. Full use of the hand was regained about four months after the original injury (Figure 5).

DISCUSSION

Each of the patients presented received prompt and thorough primary treatment of their injuries yet suffered several months of disability. If the delicate hand mechanisms are to be preserved, first aid treatment of hand injuries must be prompt and efficient. The basic principles of



Figure 4. Appearance of hand following burn and skin loss due to homemade rocket (Case 2).

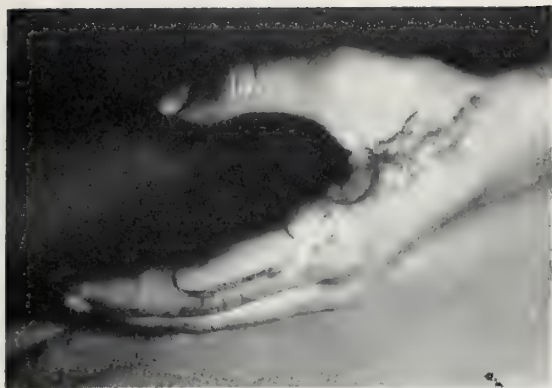


Figure 5. Appearance of hand (Case 2) four months after skin graft and physical therapy. There was residual hypesthesia over the radial aspect of the proximal phalanx, index finger. The patient had regained full use of the hand.

good first aid treatment include protection against infection and immobilization in a position of function.² It is highly desirable that the person rendering first aid be able to apply a bulky pressure dressing that will protect the wound, control bleeding, minimize swelling, and keep the injured parts at rest (Figure 6). The hand should be immobilized in the position of function with the aid of an aluminum, plaster of Paris, or wooden splint.

After the patient has arrived at the hospital, he must receive a general physical examination so that correct priority of treatment can be established. This is especially true for patients with multiple injuries and for the elderly. In addition to a surgeon experienced in the treatment of hand injuries there must be available operating room nurses and adequate assistance for the operating surgeon. Hand cases are major operations requiring full operating room facilities, strict asepsis, with proper technique including masks, gowns, and drapes. A full supply of instruments, good lighting, and a pneumatic cuff to assure a bloodless operating field must be available. General anesthesia usually will be required.

Preliminary examination is necessary to evaluate the hand injury before taking the patient to the operating room but this must not be careless with respect to asepsis or cursory with respect to the extent of injury. Preliminary examination should be done in a clean area and personnel should be gowned and wear caps and masks. A few sterile instruments and bandages

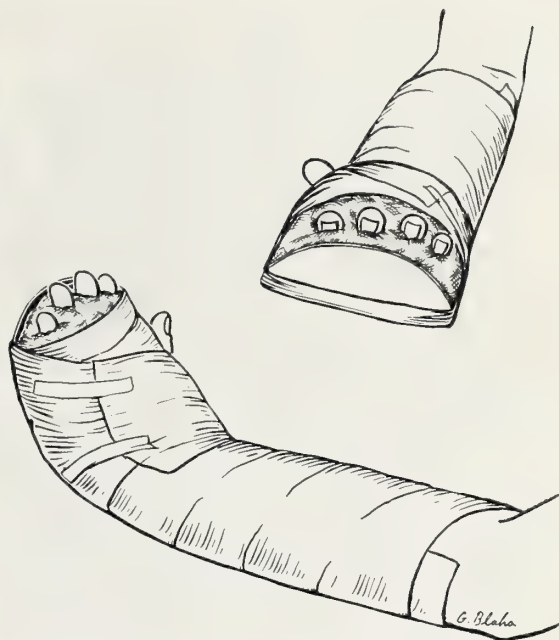


Figure 6. Bulky pressure dressing, including aluminum splint, serves to protect wounds, control bleeding, and keep injured parts at rest.

ought to be ready to protect the wound against further contamination. After determining the details of when and where the injury occurred, and the extent of first aid treatment rendered, the wound must be evaluated as to the type—i.e., incised, contused, or crushed, and the degree of contamination present. Assay of structural damage includes: extent of skin loss, severed arteries, tendon lacerations, sensory (digital) and motor nerve injuries, and bone and joint injuries.

There are certain principles in the operative treatment of high explosive injuries that require re-emphasis.³ Thorough soap and water preparation of the entire hand and forearm, with the wound protected, together with a pneumatic cuff for a bloodless field, are important. Careful and thorough cleansing of the wound by repeated saline irrigations with every attempt to remove all foreign material are mandatory. High velocity injuries tend to drive foreign materials deep into the wound and it is necessary to remove all bits of foreign matter to guard against chronic infection and osteomyelitis. Case 1 illustrates the difficulty in removing all foreign bodies despite excellent initial care. Careful debridement of obviously devitalized tissues should be done.

These injuries frequently are complicated by

fractures of the metacarpals or phalanges. It often is possible to maintain reduction of fractures by immobilization on the universal splint.^{4,5} If it is not possible to maintain good alignment by immobilization alone then it may be desirable to use skeletal traction with thin Kirschner wires inserted through the terminal phalanx or finger pulp and connected to a splint or plaster cast by elastic bands. Occasionally, open reduction, using small screws or intramedullary wires, may be necessary if reduction cannot be maintained by position alone.⁶

The presence of significant skin loss requires conversion of the open wound into a closed wound by use of skin grafting. Significant skin loss together with the presence of fractures precludes primary tendon repair. It probably is better in most cases to postpone definitive repair of lacerated tendons until the skin and the fractures, if present, have healed satisfactorily. If anesthesia distal to the wound indicates nerve damage, however, an attempt to repair digital and palmar branches as well as the main nerves in the wrist always should be attempted. There is little to lose because if neuromata form, at least the nerve ends will be in continuity. We believe that fine black arterial silk swaged on curved needles should be used for this purpose.

In the presence of extensive wounds, including traumatic amputations, careful debridement and preservation of all viable tissue are required. Skin coverage is provided by local skin, split thickness grafts, or pedicle grafts from the abdomen or thorax. Amputated stumps should be left at full length rather than attempting to obtain local flaps by removing viable bone. Partially amputated digits should be approximated by skin sutures as many will survive. A pressure dressing is applied carefully, with the fingers separated with gauze and the entire hand and forearm protected by fluffed gauze. A well padded aluminum splint is fixed to the forearm with adhesive tape and wrapped with elastic bandages. Fingertips should be left exposed if possible and should be pink and warm after releasing the pneumatic cuff. Other details of postoperative care include elevation of the extremity and antibiotics and tetanus antitoxin or toxoid as indicated.

The original dressing usually is left undisturbed for five days unless the patient complains

of severe pain or the dressings become stained or odorous. Severed tendons and nerves require three to four weeks of continual immobilization. Corrective splinting may be required if severed nerves have caused muscle paralysis or imbalance.

SUMMARY

Two cases of hand injury due to homemade rocket bombs have been presented. If prolonged or permanent disabilities are to be avoided, careful attention must be paid both to the first aid and definitive treatment of such injuries.

Good first aid treatment includes protection of the wound against additional contamination by the application of sterile dressings and a bulky pressure dressing. Such a covering tends to control bleeding, minimize swelling, and keep the injured parts at rest. Immobilization in the position of function by the pressure dressing and splinting tend to prevent muscle contractions and joint stiffness.

Definitive operative therapy is a major procedure and requires complete facilities in the way of operating rooms, personnel, instruments, and the most careful asepsis. Meticulous wound debridement, with every attempt to remove all foreign materials is mandatory. It is important to convert open wounds, especially those with significant skin loss, to closed ones with the use of split skin grafts, if necessary. Open fractures if present must be reduced after the most careful wound cleansing. Although primary repair of divided tendons usually is not possible in extensive injuries, every effort must be made to repair severed digital and palmar nerve branches. Careful attention to the basic principles of operative technique should reduce materially disability following high explosive injuries of the hand.

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Clinical-Surgical Conferences



Peripheral Arterial Emergencies

*Department of Surgery,
Cook County Hospital*

Moderator:

ROBERT J. FREEARK, M.D., Director, Surgical Education, Cook County Hospital

Discussant:

ORMAND JULIAN, M.D., Professor of Surgery, University of Illinois College of Medicine, Attending Surgeon Presbyterian-St. Luke's and Research and Educational Hospital.

Dr. Robert J. Freeark: Surgical emergencies involving the peripheral arterial tree appear to be on the increase. The aggressive approach toward restoration of arterial continuity represents one of the milestones of recent surgical progress. With us today is one of the world's outstanding authorities on the management of such cases. Dr. Ormand Julian is professor of surgery of the University of Illinois College of Medicine and a cardiovascular surgeon whose experience and background in the clinical and laboratory aspects of this problem are unsurpassed.

Case 1: Popliteal Artery Injury with Compound Dislocation of the Knee.

Dr. John Raffensperger (Surgical Resident): Patient is a 28 year old negro male, admitted to the fracture service of Cook County Hospital on Oct. 4, 1957, having been struck by a truck three to four hours prior to admission. Initial care at another hospital consisted of the application of a sterile dressing and splint to the injured extremity. Significant physical findings

were bruises, a laceration of the chin, and a compound posterior dislocation of the right knee, with the femoral condyle presenting through the laceration on the lateral aspect of the knee.

The leg and foot were cool and pallid, with anesthesia of the plantar and dorsolateral aspect of the foot. Patient's general condition was excellent; pulse 100, blood pressure 130/80, temperature 98.6°. Preliminary emergency film revealed no associated fracture and the hematocrit was 45 per cent.

The patient was taken to surgery one hour after admission. He was given a spinal anesthetic with a level of anesthesia established at the costal margin to reduce any element of vasospasm. The leg was prepared with a 10 minute soap and water scrub of the area adjacent to the wound. The wound was irrigated with normal saline and debrided. During debridement none of the soft tissues bled and the leg remained ischemic.

The dislocation was readily reduced by longitudinal traction and resulted in a sudden gush of blood from the proximal popliteal artery. The artery was controlled by hemostat and the senior resident was called. Dr. Joseph Hinkamp performed an end to end anastomosis of the completely severed vessel using a one layer suture of continuous 5-0 arterial silk. The leg was maintained in 90 degree flexion. No catgut sutures were used on the muscle. The skin was closed with fine wire. Before the anesthesia wore off the

leg was warm, the dorsalis pedis pulse was felt, and skin color and capillary flow appeared excellent.

Postoperatively the patient was given tetanus toxoid on the basis of previous immunizations in the armed forces. He was kept on penicillin, streptomycin, and Papaverine®; and paravertebral blocks with 2 per cent Xylocaine® were performed every six hours. The leg remained warm and the pulses good. Flexion was maintained for three weeks and then gradual straightening of the leg was instituted. The patient remained in a posterior mold splint for two months longer, and when taken out of the splint he was found to have a peroneal nerve palsy with drop foot. A brace was supplied and he has made a very good recovery. (Patient shown here). He has bilateral pedal pulses and his function is good. There is no diminution in the pulses as compared with the opposite side by palpation, and no neurologic residual is detected.

Dr. Freeark: In summary, we have the problem of a six hour old open dislocation of the knee with complete disruption of the popliteal artery. The latter was not established until the time of surgery.

Dr. Ormand Julian: This is an unusual injury with an excellent result. It would appear that this man's failure to bleed was due to mechanical compression of the proximal end of the transected vessel. The diagnosis of arterial occlusion was not really a problem before surgery, nor was there a question of whether or not the knee had to be operated upon. The problem was one of repair and it appears obvious that you need little advice from me.

This case brings up what may be called the most important kind of arterial injury: a laceration which did not bleed, due to the peculiar circumstances of this case. Usually, lacerations of arteries are easily diagnosed because there is blood loss and you know from its volume and color it comes from an injured artery. In some of these injuries there may be laceration or perforation of a vessel and the penetrating injury is so small in extent there is no external hemorrhage. This type is commonly caused by a thin knife or an ice pick and the blood loss is into the tissues but not to the outside. Diagnosis of this kind of injury is made on the basis of evidence of blood loss into the tissues. Such a concealed hemorrhage leads to the development of

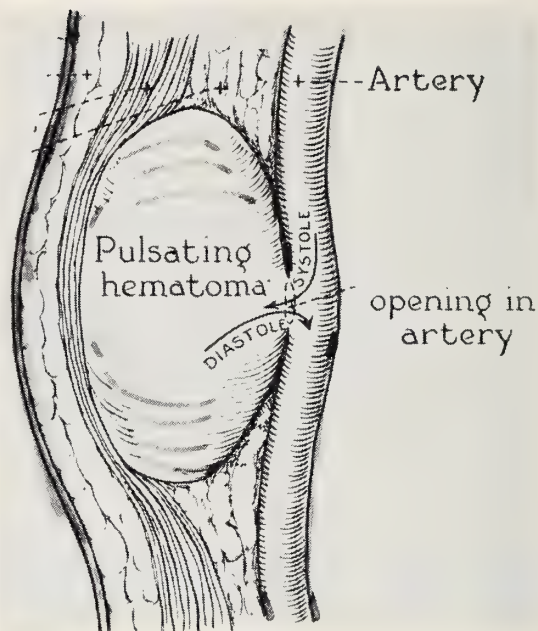


Figure 1

a pulsating hematoma or false aneurysm. Figure 1.

A much more difficult type of arterial injury is one that obstructs the blood vessel without external hemorrhage. This is called an intramural hematoma or bruise of a blood vessel—Figure 2. It is caused by a crushing trauma, usually in an extremity. It occurs in bumper injuries, and I will show illustrations of one such case. This patient had a bumper injury and there was no external hemorrhage. He had a minor amount of pain in his leg. There was no swelling or pulsating hematoma, but there was no pulse in his leg distal to the knee. Arteriogram showed filling of the superficial femoral artery down to the point of occlusion near the knee. There was some collateral circulation producing filling of the

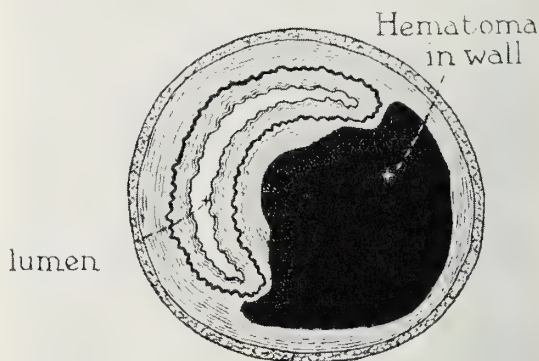


Figure 2

popliteal artery beyond the injury. This patient's foot, therefore, was not totally ischemic. The fracture was in the medial condyle of the femur and the injury was caused by a bumper of an automobile hitting the man on the posterior aspect of the knee.

The differential diagnosis in this type of case is between arterial occlusion due to bruise of the artery and a severe arterial spasm secondary to the injury. We have all seen cold painful feet with any kind of injury to the leg, even with acute tear of the semilunar cartilage. Most of these cases represent spasm. Therefore, it is easy to miss the type of injury with thrombosis, and after a variable period of time the thrombus extends far enough to occlude remaining collaterals and cause real trouble. Here is what the injury looks like under the microscope (figure 2 shown here). This is the same patient I have described to you, and there is a hematoma within the wall of a blood vessel that is external to the intima and has pushed the inner layer of the blood vessel into the lumen so as to produce obstruction. The media is partly destroyed and there is a blood clot within the narrowed lumen. This clot would progress distally if the lesion were not discovered and treated promptly.

This same kind of lesion occurred in a man working on an elevator. He was standing on the platform reaching out onto the floor through the door and the elevator started to go down. His arm was caught between the upper frame of the door and the floor. There was no fracture. He had pain in his arm, the pulses were absent, and there was no swelling in the arm region. At operation an intramural hematoma of the brachial artery was found. This was resected and a homologous artery graft was put in, with restoration of circulation.

As I have said, diagnosis of the condition rests between intramural hematoma of a blood vessel and spasm. To make the differential diagnosis one might always do an arteriogram, but I think this is probably both misleading and impractical. We think that most patients who have vascular spasm rarely have anesthesia of the skin in the distal parts of the extremity. They may have hypesthesia but the ischemia is not enough to cause total loss of function of the peripheral nerve endings. Where you may be misled on this finding is in cases of combined nerve injury

and, therefore, anesthesia—no arterial injury, but just spasm.

Another way to make a diagnosis is to do a sympathetic block. We have the feeling that instead of doing repeated lumbar paravertebral blocks in a patient with lower extremity injury it is simpler to put in an epidural or caudal catheter and leave it in for two or three days, replenishing the anesthetic agent as often as needed. In this way the sympathetic block is continued, while at the same time pain—and thus the need for narcotics—is reduced.

The patient shown here today had a direct anastomosis. A graft usually will be necessary in a bruise of an artery. If a vein graft is feasible, it may be taken from the patient's own extremity. Arterial homografts are available from the Chicago Heart Association's graft bank. Possibly more favorable would be a prosthesis made of one of the plastic cloths now on the market, such as Dacron®.

The thought I would like to leave in regard to intramural hematoma of a blood vessel is that diagnosis of the condition will not be made unless the possibility is remembered whenever there is a crushing injury of an extremity. It can be ruled out only if you continue to feel pulsations distal to the site of an arterial injury. Lack of hemorrhage does not mean a thing.

One additional point deserves mention. I notice that an anticoagulant was not used in this case and I agree with that entirely. The need for this drug does not exist if you have re-established a forceful circulation. It is well to remember that anticoagulants can do more harm than good many times in trauma cases. In using graft material for chronic occlusive disease, a different situation exists, in that the arteries through which you re-establish circulation are not normal. Anticoagulants are useful in that situation because there remains, no matter how good the operation, a certain stasis in the arterial system receiving this new blood flow. The underlying vascular disorder imposes some degree of distal arterial occlusion. In these patients we usually use an anticoagulant, principally heparin.

Dr. Don S. Miller: (Attending Staff—Orthopedic Surgery—Cook County Hospital) I would like to ask Dr. Julian several questions: What is the role of sympathectomy—either immediate or delayed? Have you had experience with intra-

arterial medications such as Priscoline® or histamine? What about the multiple injury patient where there is a suspicion of arterial injury but you have to wait a while because of neurosurgical or thoracic problems before you can attack the extremity condition? Can anything be done during the first two or three days required to get the patient in condition for extremity surgery?

Dr. Julian: Sympathectomy will preserve a certain number of extremities in which the popliteal artery is occluded that would not otherwise survive in the absence of repair of the artery. Sympathectomy will not help popliteal artery injury if there is any degree of soft tissue damage in the area that handicaps the collateral circulation. As soon as edema develops around the knee, the geniculates and other collaterals around the knee level are pretty much inactivated, and sympathectomy really would not play a part any more. The objective of treatment is repair of the artery. Operate on the vessel and not the sympathetic chain. The use of sympathetic blocks and other vasodilating mechanisms may be of assistance in preserving an extremity in which you are not going to be able to repair the popliteal artery. If the patient has had a head, chest, or other injury in addition to the injury to the extremity, and if these other injuries make repair of a peripheral artery impossible, apply whatever measures would not harm the other injuries. You would be unable to use a most important medication—namely, heparin—because it cannot be used in a patient with head injury. Yet it is the most important part of the management of a patient upon whom you do not operate, because it will diminish the tendency for proximal and distal extension of the clotting.

The intra-arterial medications really have little value. Histamine has only a fleeting effect, and its use requires puncture of an artery. The best medication for intra-arterial use is Papaverine, which acts directly on the blood vessels. We do not use systemic vasodilators any more. I think the most potent vasodilator to use systemically would be heat to some part of the body other than the injured extremity. The problem does not arise really because our aim is to repair the artery.

QUESTION: In trauma with contusion of the vessels, where absent pulses make the distinction between spasm and mechanical block diffi-

cult, would you do arteriography or do you explore right away?

Dr. Julian: I think in general we would go ahead and explore. We have not yet explored a vessel we thought was injured and found that it was not.

Dr. Freeark: What about a grossly contaminated wound in which a blood vessel requires restoration of continuity and the only substitute is a nylon or similar prosthetic graft? Is this likely to hold up?

Dr. Julian: That is a great problem. We have not had a grossly contaminated wound in which we have placed a Dacron graft. When a Dacron graft becomes infected, it almost always is lost. In the first place it becomes a pulsating foreign body in a viable extremity, and you know that when you remove the foreign body the extremity will not be viable any more. We have had two patients, however, in whom we have placed vein grafts in unfavorable wounds and in neither instance, after debridement and primary closure over the graft, was there infection or loss of arterial continuity. They were both gunshot wounds of the groin and I think that constitutes a contaminated wound. I do not know what I would do in a gunshot wound of the colon with damaged iliac vessels. I think I would just ligate it and take my chances. If a vein graft appeared feasible, I would try to get the area clean and packed away from the colon injury and subsequent colostomy, keeping in mind that I might have to go back in at any time to tie off the iliac.

Dr. Freeark: Where the graft is infected do you wait for evidence of massive hemorrhage before doing anything?

Dr. Julian: If the infected graft is in the extremity you can save the patient from bleeding to death when hemorrhage occurs but if it is in the pelvis you would have to get in on the first sign of infection.

QUESTION: Is there any rule of thumb as to the length of thrombosis that requires a graft in preference to end-to-end anastomosis?

Dr. Julian: There is no rule of thumb but there are some observations. In a young person you can lose about two inches of the superficial femoral artery and bring it together. You can lose less than that of the common femoral, and in the popliteal you ought to be able to sacrifice a little more but the number of branches immediately above and below the popliteal segment

impose limitations that outweigh elasticity. You cannot pull on these enough to bring them together. In older persons less artery is available from above and below. In any individual case, if you want to try an end-to-end anastomosis, the thing to do is to divide some of the collaterals proximal and distal to the area of the injury, and strip the adventitia off the blood vessels. This layer permits less stretching than the rest of the vessel wall. Then bring the two ends together by very steady traction on the vascular clamps. Do not bring them together immediately but slowly and gradually. If there is a good deal of tension on the holding clamps do not relax the tension at all during the anastomosis until the procedure is completed. In most situations you can relax the tension after half the anastomosis is done but if there is tension, the two clamps should be tied together. Never let the tension go until suture is complete, then release the clamps and hope.

Dr. Roscoe C. Giles: (Surgical Attending Staff—Cook County Hospital) Is it necessary to use an everting mattress stitch or is the over-and-over suture satisfactory?

Dr. Julian: I do not think anybody uses the everting sutures very much. We did at first in aortic surgery but in order to have a strong everted mattress suture you have to sacrifice a few millimeters of vessel and it isn't worth it.

Case 2: Acute Arterial Occlusion.

Dr. Eugene Broccolo (Surgical Resident): A 48 year old white male was admitted to the Cook County Hospital on July 6, 1958, because of pain and weakness in the left leg. He had been essentially well until this time. Patient stated that he was walking down the street when he had severe pain in the leg, fell to the ground, and was unable to rise. This occurred near the hospital and he came in within an hour. He said he had had no trouble with his leg previously.

Past history revealed chronic alcoholic excesses. On physical examination his blood pressure was 200/120, pulse 120, and respirations 26. The heart and lungs were negative except for tachycardia; no murmur was heard. The abdomen was negative. The left lower extremity was cold and pulseless, and the patient was unable to move it. An abrupt temperature change was noted in the midthigh area and there was no palpable femoral, popliteal, dorsalis pedis, or

posterior tibial pulsation. In the right leg all pulses were present and that leg was warm. X-ray study of the chest was negative.

On closer questioning, the patient revealed that prior to this time he had had trouble with this extremity. He said that in 1943, while in the service, he had episodes in which the thigh "seemed to go to sleep" and he had been admitted on several occasions to army hospitals. Nothing was diagnosed and no treatment given. Since discharge from the service he had been seen on numerous occasions at a VA Hospital and was told he had arthritis and was given heat treatment. He said that his last attack of numbness in the thigh was just two days prior to admission. None of this information had been learned prior to surgery.

Shortly after admission to the hospital the patient was taken to surgery where, under spinal anesthesia, a lower abdominal muscle splitting incision was made with dissection down to the area of the common iliac. The aorta was found to be pulsating well and pulsations were noted in the proximal half of the common iliac, ending at about its midportion. Tapes were secured around the artery and a limited arteriotomy performed. Soft fresh clot was removed and after closing the wound, we noted that pulsations continued for a short distance. We thought we could get better washing out of the clot in the distal vessel by making another incision in the groin exposing the common femoral artery and incising it. This we did and were able to aspirate a long proximal clot. We established good blood flow through the proximal common femoral vessel but there was little retrograde flow. Another incision was made in the popliteal area and another clot was removed and again we got a good proximal blood flow established without distal back bleeding or significant improvement in skin temperature. We then made a fourth incision in the posterior tibial artery behind the medial malleolus and in spite of repeated efforts to flush or ream out this freshly clotted artery we achieved no flow.

This procedure had taken us three hours and during this time the patient became irrational. We closed the incision and felt that we had established a good flow down to the popliteal area and that the vessel was irreversibly thrombosed below. The patient was returned to the ward and promptly developed severe delirium

tremens and progressive gangrene of the extremity. A guillotine type of amputation was carried out about one week later. He is now convalescing from that procedure.

Dr. Freeark: The right lower extremity has good pulses all the way down. Left arteriotomy was made in the common iliac, common femoral, popliteal, and the posterior tibial arteries. Back bleeding was obtained down to the popliteal but flushing from the posterior tibial artery was not successful. The condition was considered to be an acute thrombosis and not an embolus but this is open to debate.

Dr. Julian: No mention is made of a bruit over the right femoral artery. It is not common practice to listen for this, but it gives valuable information. The problem here is one of the adequate flow into the area from which the thrombus has been removed, as well as adequate outflow beyond this area. If the patient has good pulses on the other side without any bruit in the femoral area, you can be sure that the aorta is relatively normal. If there is a bruit and you have a suspicion that he has proximal disease, the same suspicion can be solved at surgery by feeling the character of the pulses and vessels, but this one point of looking for a bruit should be added to the physical examination.

Acute occlusions are produced by thrombus, embolus, or dissecting aneurysm. The latter can do anything in the way of acute occlusion. Arising in the chest, it can produce arterial occlusion of one iliac artery. Usually it produces symmetrical occlusion and usually it produces nerve changes and motor loss higher than would be produced by the ischemia of simple arterial occlusion. Thrombus rarely occurs in a normal artery; it occurs 99.9 per cent of the time in arteries that are arteriosclerotic. Every case of segmental occlusion undergoes final total occlusion due to thrombosis of the previously narrowed lumen. The amount and severity of the symptoms in the acute illness depend on how big that remaining lumen is. If it is small, the collaterals may be great enough so that the patient does not know that the lumen has closed. If it is big, he will have all the symptoms suggestive of acute embolus of a normal artery. That appears to be what this man had. It was a thrombus that appeared to be an embolus or simulated embolus because the remaining lumen in the

vessels was pretty big when the thrombosis occurred.

As to surgical treatment, it is quite easy to remove an embolus through a limited exposure of the blood vessels. To put in a graft after you find a thrombosis instead of an embolus requires exposure. If the thrombus is in the region of the aortic and iliac bifurcation you have to have a long midline incision in the abdomen because you cannot depend on doing a limited thromboendarterectomy. It almost never works to take out a short segment of the media and intima, and closing of a limited segment will not work. To do an iliac thromboendarterectomy one must always do thromboendarterectomy of the other side perhaps down to Poupart's ligament. If you find an area in this region that is so locally diseased you think you can get it out, an important step, after having removed this plaque, is to suture the inner part of the intima onto the distal end of the blood vessel; otherwise the blood stream, coming down against this area, will elevate the internal layer every time. If the procedure were carried out down to a normal area of vessel that might not happen but you cannot always do that. What you do is to put your suture in through the thin part of the wall and out through the thick part, using about eight interrupted sutures. This will hold it in place and you will have the greatest possibility of success.

We have given up thromboendarterectomy in chronic occlusion in favor of a graft. Perhaps this case should have been grafted. But as an emergency procedure in difficult cases, I doubt if any of us will succeed very often.

Dr. Freeark: Have you had much success with retrograde flushing of multiple arteriotomies as practiced here?

Dr. Julian: We had some success very early in the operative course in embolus. If we take out the embolus and have poor back flow, then we expose the posterior tibial and flush it forcibly.

Dr. Eugene Broccolo: Would the history of difficulty in this extremity demonstrate some occlusion over a long period of time? If so, would you not expect this man to develop good collaterals in obstruction of the common iliac?

Dr. Julian: I do not know how long he has had trouble, and I do not know what the trouble actually is. If he had had intermittent claudica-

tion for 15 years I would not be surprised because he looks much older than his stated age, and you go on the appearance of the patient too. There is no telling what the distribution of the occlusion was. The area that occluded might have been one of the biggest areas in his circulation and it might have been his best lumen.

Dr. Frank Theis: (Surgical Attending Staff -Cook County Hospital) This has been very illuminating. I have seen many patients of this type and we have discussed these problems often. Recently, during a presentation of cases in New Orleans there was a similar discussion and Dr. Charles Puestow asked if they were using the same prosthetic material in New Orleans as had been used in Houston. They said no and they agreed that their results were probably about the same, so that the type of prosthesis does not appear too important.

It is interesting to hear Dr. Julian mention that they have infections in some of their cases. Dr. DeBakey reported 51 cases of peripheral grafts with 49 good functional results. On inquiry as to how long these functional results were maintained, he said that he had no idea whether it was six hours or six months; they were just functional. He had not had infection in the 51 cases of peripheral grafts but apparently infection does occur.

Recently in a period of one month we had five cases that had by-pass grafts inserted elsewhere. They were completely occluded and the patients all said they were not greatly benefited by the grafting procedure. Not too long ago a surgical colleague from New York went to Houston to see why their results were so superior to anything seen in New York. That their series is singularly outstanding appears to be the case. It is hard to understand how infections occur in one group and not in another.

There is no question that some improvement in results is needed. We reviewed the cases of peripheral emboli at Cook County a few years ago. Until that time there was consistent enthusiasm for embolectomy. These cases were studied thoroughly and only one of 19 consecutive cases operated upon left the hospital alive and with his leg. There was another report from Cook County where very encouraging results were reported, and the span of years covered some of the same years included in our report. It is difficult

to reconcile our survey with that of the previous encouraging study.

I think it is important to emphasize the fact that the benefits of sympathectomy for the local circulatory deficiency of the extremity, and the long term medical management for the generalized occlusive arterial disease are well established. These measures have stood the test of time and are not to be ignored. In my experience the segmentally occluded arteries that are selected for by-pass procedures are the same type of case that permit successful management with excellent results by the safer and simpler lumbar sympathectomy. I have found the discussion of these cases both interesting and provocative.

Dr. O. Julian: I cannot say that the permanent benefit of grafts in arterial disease is proved. It is regrettable that some of the vast effort in this hospital has not been expended to provide knowledge on this subject. I would not like to have this group feel there is any support for the negative approach to the treatment of arterial diseases expressed by Dr. Theis. Infections occur, of course. They occur in New Orleans, Boston, Chicago, and Houston.

The series that Dr. DeBakey has presented is considerably larger than 51; it is now 790 cases of grafts of the aorta and peripheral arteries. His recent experience with Dacron prosthesis is somewhat like ours and consists of about the same number as our present series. They both total about 100. It is true that we do not have long follow-up on that group. Our longest is 17 months; in 75 cases, the follow-up is more than 9 months. In our series there have been 9 failures. Of these, four patients were reoperated so that of the total group of 75 patients, grafts are not now functioning in only five. The last 25 or so have shorter follow-ups but the outlook in these patients seems excellent. This kind of treatment is replacing other forms of surgery in the treatment of arterial occlusion.

Dr. Freeark: Is a patient worse off if he has a graft put in that functions successfully for a while and then occludes?

Dr. Julian: This depends upon whether the graft occludes or whether the artery beyond the graft occludes. If the occlusion is treated by implantation of a by-pass graft, later failure may occur because of thrombosis of the graft. In this event the patient is not worse off. We have demonstrated this a number of times. If, how-

ever, the patient's graft occludes because of extension of the disease beyond the distal anastomosis, so that the collaterals that were functioning are now no longer available, then the patient is made worse. But this is not a criticism of the graft.

One thing should be said about embolectomy. The success or failure of the procedure depends upon one thing besides the adeptness with which it is done and its immediate success. That one thing is the patient's cardiovascular vigor. If you have a patient with a poor myocardium because of infarction or mitral stenosis, embolectomy may fail to restore the circulation permanently. But if the heart is good, then failure of early embolectomy is most unusual.

Question: What about popliteal embolectomy? Are the results as good as in femoral embolectomy?

Dr. Julian: It is more difficult to do a popliteal embolectomy, although it is easier now because of the incision introduced at the Ford Hospital in Detroit, which allows you to keep the patient on his back while exposing the popliteal bifurcation. The incision is made along the medial border of the tibia, which gets you right in where you want to be. It gives a much better result than any other incision.

Question: What about the postoperative use of heparin? Do you maintain the patient on heparin or do you use Dicumarol®, and how long?

Dr. Julian: Graft cases we keep on heparin

for five or six days, giving the material subcutaneously. Don't give it intramuscularly, or in the skin. Give it under the skin. We use 30 mg. every four to five hours.

Dr. Broccolo: Do you use sympathectomy as an adjunct to the grafting procedure?

Dr. Julian: Not if we restore the pulses distally with the graft. A good full pulse indicates no need for sympathectomy. We frequently have explored the popliteal instead of doing an arteriogram and if it is open we put in a graft. If it is closed we do not put in a graft but do a sympathectomy instead.

Dr. Broccolo: We see patients with some degree of gangrene. What success could we expect in gangrene limited to the large toe, for example?

Dr. Julian: In general, patients with gangrene will not have an open popliteal segment. We do not do amputation without exploring the popliteal artery.

Dr. Broccolo: If the vessel is not open what do you do?

Dr. Julian: The situation has to be favorable for the graft to stay open and I think the success with grafts depends upon the willingness to expose the popliteal artery and see whether the graft can be done.

Dr. Freeark: Dr. Julian, I cannot remember spending a more profitable hour in this hospital. I believe I speak for the entire staff in expressing our appreciation for your excellent contributions to our knowledge.

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EDITORIALS



Newer trends in anesthesia

For many years anesthesia consisted essentially of giving a dose of medicine, by rule of thumb, by persons with no specialized knowledge of pharmacology and physiology. Gradually, anesthesiologists have acquired the status of physician consultants, being available to their hospital colleagues for advice in problems of respiration, circulation, drug poisoning, gas therapy, post-operative complications, and pain as well as for the actual administration of anesthesia. Now they are being recognized as physicians especially qualified in pharmacology and physiology as well as in the mysteries of electronic recording apparatus and other devices.

Public acceptance of the anesthesiologist is still in its infancy. Nonetheless, progress is rapid and the time honored "whiff of gas" and "shot of Pentothal®" are fast becoming extinct from the lay vocabulary.

Recognition, therefore, may be cited as one of the major changes in the concept of anesthesiology today.

The word, anesthesia, denotes a reversibility of action; the connotation of the word has come to imply a controllability of action as well. Much of the anesthetic progress in the past century has been in the achievement or improvement of this controllability, and the trend has been accentuated greatly during recent years. The development of the short acting anesthetic agents, such as cyclopropane, sodium Pentothal, and succinylcholine, represents increased control-

lability from the pharmacological point of view and the utilization of hypothermia, induced hypotension, extracorporeal circulation, monitoring devices, or mechanical ventilation during anesthesia, is an attempt to attain such controllability from the physiological standpoint.

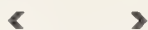
During the past decade, in addition to recognition, there have been numerous changing concepts in anesthesiology, notably the change toward balanced anesthesia, utilizing careful titration of several anesthetic agents; and the change towards lighter planes of anesthesia with muscle relaxants. During this period, the concept evolved of the role of the reticular activating system of the midbrain as a site of action of anesthetic drugs. There has been increasing attention by the anesthesiologist to problems of pulmonary ventilation and adequate CO₂ elimination. Servo mechanism and monitoring devices have become tools of the anesthesiologist. There has been continued research for intravenous agents, both barbiturate and nonbarbiturate, and the clinical trial of a number of promising compounds. Search for a high potency nonflammable anesthetic agent has led to the introduction of a halogenated compound, Fluothane®.

Significant advances have been made by anesthesiologists in the understanding of pain and its treatment. Adequate knowledge and skill in local and regional anesthesia and the use of analgesics, sedatives, and other drugs make the anesthesiologist able to contribute significantly towards the solution of pain problems.

Anesthesia has advanced rapidly, perhaps more

so in the past few years than any other branch of medicine. Every single aspect of this specialty has changed for the better for both the patient and the surgeon, offering better health and less risk to the one and facilitation of surgery to the other. This statement, however, must be most emphatically conditioned by the need for the highest level of training, knowledge, experience, and skill on the part of the anesthesiologist who uses present day methods.

Mary Karp, M.D.



Adequate medical care

What are the components of adequate medical care? Ward Darley, executive director of American Medical Colleges, is of the opinion that "the qualitative aspects, particularly those inherent in the potential for good in the doctor-patient relationship, such as optimum patient load and methods of administering and paying for comprehensive care, have yet to be fully developed. The physician now sees one-third or more patients in the same unit of time as he did 10 years ago. This is why, even though his charge per unit of service may not have kept pace with the rising cost of living, he has done extremely well so far as his total net income is concerned. This increase in patients seen per unit of time is a reflection of the tremendous increase in the efficiency with which medical care is rendered. The time now has come when special attention needs to be given to the proper balance between the efficiency and the effectiveness of medical care. When does efficiency in terms of the use of assistants, technicians, and gadgets—all of which cut down on the physician's time per patient and hence increase efficiency—begin to bring diminishing returns in terms of effectiveness?"*

The medical profession has devoted much of its time and effort to raising hygienic standards in the layman and banishing disease. The layman appreciates the scientific achievements of the medical profession but somewhere along the line it has failed to win the respect of the public. One reason is that we have not made comparable strides in the business of practicing medicine. Industry is constantly improving its way of do-

*What is the Next Step in Improving the Teaching of Preventive Medicine? Summary of a talk given at the 1958 annual meeting of the Association of Teachers of Preventive Medicine by Ward Darley.

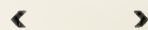
ing business. New departments are created to handle the changing demands of customers. Service divisions keep abreast of advances in new models and other equipment.

We need more research in medical economics. The prevention, diagnosis, and treatment of disease has changed radically in the past few decades. Our patients are better educated health-wise but the day is past when a physician can afford to let his office become seedy looking because he is too busy or preoccupied with the problems of medicine. Patients expect neat, clean, modern offices. A mid-Victorian office is synonymous with mid-Victorian medicine.

The modern physician should accept innovations as executives do. But we are likely to resist any break in the routine way of doing things. Many physicians continue to waste their time and talents on duties and activities that could be delegated. They cannot answer their patients' questions because they are so busy examining urine, changing dressings, and making out forms that a high-school girl could be taught to do.

An efficient physician gives patients their money's worth. The public does not care to pay for poor management or simple duties done at a physician's rate of pay and it would be less critical if the physician ran his business as efficiently as industry does. Most physicians would be money ahead if they hired an efficiency expert, even though it cost many thousands of dollars, to evaluate the problems and suggest changes. Improvement of this aspect of the practice of medicine would go a long way toward improving our public relations.

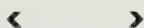
When the public is satisfied with a well run profession, the clamor to nationalize it will go unheeded. Let us make private practice more appealing than socialized medicine.



A shrewd move

The next time a gentleman in a white coat impersonates a physician on TV, don't be surprised to learn that he is a real M.D. The National Association of Broadcasters adopted a code forbidding the appearance on TV commercials of actors portraying M.D.'s, dentists, or nurses. But the code does not forbid accredited physicians, dentists, and nurses from appearing and this is just what is happening. The NAB believes it has done its part. The retiring president is reported to have said, "It is now up to the pro-

fessions to police their own people, and we have told them so."



Red medical tactics

John Connor, president of Merck, told a legislative committee last month that his company is constructing an antibiotic plant in India with support from the Indian government.

"The rising expectations of the people of the uncommitted countries for a better life is the most powerful force in the world today," Connor said. "The Soviet Union understands this, and is moving to exploit the health and medical needs of the underdeveloped countries as she has exploited other needs and aspirations of these peoples. This is the area which I feel demands priority attention because here is the area of desperate need for health and medical progress; the area likely to produce fresh answers to many of the age old scourges of man as well as to newly discovered or newly developing diseases; and the area of sharpest competition with the medical offensive of the Soviet Union."

Connor stated also that Russia is sending about 2,000 physicians a year into underdeveloped countries. They are in reality medical missionaries who spread the gospel of Communism. This secret weapon deserves serious thought.



Toxicological laboratory proposal

A proposal for improved criminal investigation and preventive medicine laboratory services in Illinois is to be considered by the State Legislature during its current session.

Under the sponsorship of the Illinois Advisory Board on Necropsy Service to Coroners, a bill is being presented to the Legislature to establish toxicological laboratory services as a part of the Department of Public Health Laboratories located in Springfield and Chicago.

Long recognized as a serious need in Illinois, the toxicological laboratory will assist law enforcement officers, coroners, and public health officials in detecting poisonous substances that are used to commit crime or that are accidentally polluting public water supplies.

Dr. Edwin F. Hirsch, Chairman of the Necropsy Board, recently pointed out that there is no place in Illinois that a local law enforcement official may send his evidence for immedi-

ate determination on whether or not a poisonous substance has been involved in a criminal death.

"The Necropsy Advisory Board, through this proposed legislation, is providing a scientific facility from which law enforcement officials and coroners can seek proper and timely evidence in their investigations of the circumstances of death," said Dr. Hirsch. "The lack of such toxicological facilities in Illinois has led some persons to believe that it is relatively easy to commit murder by poison in this State."

Members of the Board also indicate the need for added public health laboratory methods and equipment to determine some of the chemically complicated wastes being discharged into Illinois streams and waterways, making them potential hazards to public health.

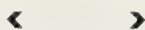
Endorsing the proposal are many state-wide organizations representing judicial, law enforcement, medical, and civic officials. Leadership in the endorsements is being given by the Illinois State Medical Society and the Illinois Association of Coroners.

Included in the bill creating the laboratory service is a request for \$200,000.00 to finance the proposal. The new services will be incorporated into presently existing public health laboratory facilities, but will require special equipment and specially trained laboratory personnel.

Illinois Advisory Board

on

Necropsy Service to Coroners



Nutrition in CV disease

This month we will publish the 7th consecutive article on cardiovascular disease. These papers have been prepared by a selected group of specialists and submitted under the auspices of the Nutrition Committee of the Chicago Heart Association. They have been factual, conservative, timely, and interesting.

We are happy to hear that the series will be continued for another year. According to Dr. Richard J. Jones, department of medicine, the University of Chicago, the following topics will be covered:

Exercise, Caloric Balance, and Atherosclerosis
Obesity and Hypertension

Body Weight and Coronary Atherosclerosis
Niacin and Blood Cholesterol

Oration speakers at annual meeting



Frank L. Meleney, M.D.

Lecturer in surgery, University of Miami School of Medicine, and professor emeritus of clinical surgery, Columbia University, will deliver the Oration in Surgery at the annual meeting. His subject will be "Changing Concepts in the Use of Antibiotics."



Jerome W. Conn, M.D.

Professor of internal medicine and director of the department of endocrinology and metabolism, University of Michigan Medical School, will deliver the Oration in Medicine at the annual meeting. His subject will be "Sodium, Hypertension, and Primary Aldosteronism."

Dietary Fads in Heart Disease
Anabolic Stimulation in Congestive Heart Failure
Simple Rules in the Construction of a Low Fat Diet
Dietary Management of Renal Failure
Dietary Magnesium and Blood Cholesterol
Dietary Considerations in Long Term Anticoagulant Therapy
Beriberi Heart Disease
Low Salt Diet—Newer Recommendations

Help, help!

Herman H. Henkle, librarian, John Crerar Library, informed the Chicago Medical Society recently that the library's "endowment income is no longer sufficient to meet the requirements of maintaining collections and services in science and medicine commensurate with the greatly increased rate of publications and the demand upon the services of the library. This situation has

existed for about a decade. During this period the library has been increasingly dependent on supplementary support from the community it serves.

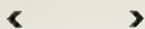
"Although the proportion of the library's income that comes from the community still is only about 11 per cent of the operating funds it is a very vital percentage; and there is serious need for the percentage to be increased.

"The major proportion of unrestricted gifts (amounting to \$68,779 during the fiscal year ended September 30) comes from industry, but a number of important gifts come from professional sources, including the \$2,500 annual association membership the Chicago Medical Society has contributed during the past seven years.

"Another important part of such income has been derived through individual memberships in the Library, more than \$6,000 having come from this source during 1957/58. During the past year, 561 individuals contributed \$10 or more each

through membership in Crerar Library. Of these individual members, 153 were physicians. It is our belief that many more physicians may be interested in joining this group. I appreciate this opportunity to invite each of you to do so.

"The medical collections of Crerar Library are the most extensive of any medical library west of the Atlantic seaboard. We will be unable to keep them that way, however, without additional support."



Editorial from other journals

Behind the times

Some of the people who read both newspapers and scientific journals are surprised to discover that on occasion new findings revealed by scientists in articles submitted to journals are making their initial appearance in the daily press. Before the scientist himself sets forth in complete form his results and supporting evidence, a reporter scrapes some of the icing off the cake to give the general public a taste. But if this kind of occurrence is one of the signs of the growing role that science is playing in public affairs, it does raise some questions about the functions of the two kinds of publications and of the relation between them. The contrast between newspapers and scientific journals is something more than the contrast between popular and technical presentations.

Although a scientist who has completed an article is anxious to have his findings appear in the near future, to a newspaperman with a story, instant publication is none too soon. The interest each newspaperman has in reporting the news before his fellows can work to the advantage of the public and to the advantage of scientists. With a wide range of scientific developments having an immediate bearing on the general welfare and security of the nation, it is important for the public to have news of developments and it is often important that they have the news fast. The scientific community is also served by this form of rapid communication, since investigators can learn of work being done in other laboratories even if the full details are not provided.

If newspapers are primarily interested in quick reporting, then scientific journals are concerned chiefly with establishing the authenticity of what they publish. Of course, a news story

about a new finding not only states what is claimed but who makes the claim and the circumstances of his making it. But the appearance of the story in a newspaper, unlike the appearance of an article in a journal does not add to the authority of the research. Publication of an article in a scientific journal does so because editors of journals frequently have articles describing new work examined critically, before publication, by specialists in the subject with which the article deals. *

Although newspapers and scientific journals have different functions, a possible point of conflict between them is that reporters may want information about new findings that scientific editors and publishers should not yet reveal. The only proper way, it seems to us, for a journal to release information about its contents is through the appearance of the journal itself. To institute a policy of disclosing prior to the publication date a portion of the contents would add a task to the work of editing and reviewing articles that might work against the journal's primary responsibility of attempting to insure the merit of what it publishes.

Given the fact that some reporters may ply their trade more cleverly than others, and given the fact that journals are not the only means of communication in the scientific world, another aspect to the relationship between the daily press and the scientific press also follows. Besides scientific journals, there are addresses, meetings, and gossip. Consequently, on occasion a reporter will come upon a piece of research that he finds newsworthy, but which, although it is scheduled for scientific publication, has not yet appeared. If, under these circumstances, the reporter scoops the journal, then those involved in scientific publication hope that he gets the story right. —J. T. *Science*, Feb. 6, 1959.



Council meeting minutes

The regular March meeting of the Council was held at the Hotel Sherman, Chicago, on Sunday, March 8, with the following present: Oldfield, O'Neill, Lorne Mason, Youngberg, Camp, Clark, Kirby, Hesseltine, Reichert, Portes, Piszczek, Dooley, Blair, Endres, Reisch, DuPuy, Goodyear, English, Montgomery, Fullerton, Hopkins, Cross, Bornemeier, Cannady, Burdick, Limarzi, Neal, Oblinger, and Mirt.

The minutes of the February 1st meeting were approved as mailed to members.

Dr. Oldfield reported as president on various meetings he had attended since the last meeting of the Council which included the American College of Radiology, the 100th anniversary luncheon of the American Dental Association, a meeting of the Society's Committee on Industrial Health, a meeting of Dr. English's special committee to study the Illinois Medical Journal, the CMS Clinical Conference at the Palmer House, the Society's Committee on Constitution and By-laws, etc.

Dr. O'Neill reported that as president-elect he had attended the AMA meeting in Pittsburgh that dealt with the problem of "third parties" in the practice of medicine. He will present a full report later.

MOTION: (Piszczyk-Fullerton) that the contract for space at the Illinois State Fair be signed for 1959. Motion carried.

Exhibit space (for the material dealing with early automobiles being prepared by Mr. Mirt) has been granted for the Atlantic City AMA meeting in June.

Dr. Montgomery reported as chairman of the Executive Committee. The Committee has suggested that the Illinois Public Aid Commission prepare a pamphlet outlining the duties and responsibilities of the county units for distribution. A similar pamphlet has been developed in Wisconsin (where a program like that in Illinois is in effect) and the material has been helpful. The Chairman of the Council was officially authorized to sign the pamphlet as the representative of the ISMS.

Dr. Montgomery reported that as a means of getting information to the various county societies in his Ninth Councilor District, he has initiated a called meeting of the presidents, secretaries, and the delegates to get together a week following each Council meeting. After the last Council meeting all county societies in his district but one were represented. On March 15, he plans another meeting in Marion to go over the actions of the Council taken at this session, and to keep the local men informed as to what is going on at the state level.

MANAGEMENT SURVEY AUTHORIZED

Dr. Montgomery reported that the Executive Committee has had under consideration the possibility of bringing in efficiency or management

experts for a survey of the ISMS. The committee has been working on this for some time, and has recommended the firm of Rogers, Slade & Hill as the consultants with the most experience in the field of medical society survey. Dr. O'Neill discussed the proposed action and stated that the report prepared by this firm for the New York Society was excellent; similar work had been done in Pennsylvania, North Carolina, and Maryland, and perhaps will be carried out in Indiana also. A pilot study is suggested at this time, with the opportunity to have a more complete survey undertaken if it seems advisable. The committee recommends that Rogers, Slade & Hill be asked to make a pilot study of the ISMS prior to the annual meeting in May.

Council approval was given for this work, and the officers of the Society were empowered to sign the agreement with an agency to be selected (either Rogers, Slade & Hill, or George Fry & Company of Chicago). The Council suggested that a report of the survey be available at the time of the annual meeting in May.

Dr. Montgomery called the attention of the Council to the fact that the expenses of the Society are increasing constantly; that activities are becoming "big business" and it is entirely possible that an increase in dues will have to be recommended to the House.

MEDICAL SERVICE & PUBLIC RELATIONS

Dr. Hopkins reported on the activities of the committee. Plans are developing for the legislative dinner in Springfield on March 31; the speaker will be announced later. Legislative manuals have been mailed out and various comments received.

The various house bills and senate bills either before the 71st General Assembly, or under development were outlined and Society policy established. The Governor's reorganization bills were discussed in detail; a similar revision took place in 1919 under Frank Lowden. If members of the Council have suggestions the Committee would be pleased to receive them.

ADVISORY COMMITTEE TO IPAC

The Commission has raised the ceiling to \$5.00 on drugs. Two members of the ISMS committee met with the commission on February 6 in regard to an increase in fees for physicians. The commission has authorized a 50 per cent increase

—\$3.00 for an office call; \$4.50 for a house call (7:00 a.m. to 7:00 p.m.), and \$6.00 for a night call (7:00 p.m. to 7:00 a.m.) This will represent an increase of \$2,500,000, and the Commission has it set up as a separate listing on the budget. One member of the committee and Mr. Oblinger will meet with the Commission at the hearing in Springfield.

POSTGRADUATE MEDICAL EDUCATION AND SCIENTIFIC SERVICE

Dr. Limarzi reported as chairman, that the Postgraduate Medical Education and Scientific Service Committee had postgraduate conferences scheduled for Olney on March 26; Lincoln on March 19; Mattoon on April 2; Waukegan on April 8; and Centralia on April 16. The new radio series "Your Health Comes First" a service program over WJJD, had its first program on February 25—"The Conquest of the Inexcusable Diseases" with Dr. John Lester Reichert as the speaker. This is a monthly series of 15 minute recorded radio talks on the fourth Wednesday of each month at approximately 6:45 p.m. Two physicians who appeared on the program at the Chicago Medical Society Clinical Conference, will present the program on March 25—"The Management of Asthma in Infants and Children" (Dr. John P. McGovern of Houston, Texas) and "The Treatment of the Epileptic Child" (Dr. James G. Hughes of Memphis, Tennessee).

MEDICAL ASSISTANTS

Dr. Clark reported that the Medical Assistants Association desired Council approval for three suggested activities. First they want to develop a definition of a "medical assistant"; (2) they desire to survey the educational facilities available and needed; and (3) they desire to outline job specifications and standards for training. The Council approved these activities.

DEPARTMENT OF PUBLIC HEALTH

Dr. Cross reported as Director of the State Department of Public Health. The polio vaccination campaign in Illinois has been going along very well. The demand for the vaccine has been steady during the past 15 months with only a slight decline in the fall and early winter months. Somewhat more than 1 million doses of polio vaccine were distributed by the Department during 1958 and about 150,000 so far this year. The efforts of the medical profession in promoting

the campaign are undoubtedly an important factor in the demand for vaccination. In 1958 there were 200 cases of polio in Illinois compared with 307 in 1957 and totals ranging from 1,400 to 4,000 in each of the preceding six years.

Diphtheria: A word of caution about diphtheria is in order. Last year there were 12 cases with two deaths from the disease, and so far this year, five cases with one death, against three cases and no deaths reported during 1957. Except for three cases in Rock Island County and one in Iroquois, all of the cases in 1958 and 1959 occurred in the Chicago metropolitan area. It seems obvious that carriers of virulent diphtheria bacilli are abroad. This emphasizes the need for alertness as to illness with diphtheria and as to immunization against that disease.

COMMITTEE ON AGING

Dr. E. W. Cannady reported as chairman of the Committee on Aging. He requested Council action on six important items.

1. Approve, sponsor, and finance a one-day conference in aging for representatives of county medical societies to acquaint them with and to arouse their interest in the problems of aging, and to encourage the development of positive county programs. The type of program would be similar to that of the recent AMA Conference and would outline the six point program of the AMA. Guest speakers would be invited to discuss the six point program and also to review the activities of other groups in Illinois, including the Department of Public Health, nursing home activities, and problems of geriatric rehabilitation. Other subjects would include methods of financing the medical care of the aged, the program of the state committee, the responsibility of the physician in the problems of care of the aged, and the development of county society programs. It will be necessary for the ISMS to provide funds for: 1. preparation and mailing of notices to county medical societies; (2) meeting room facilities; (3) recording and preparing the proceedings to be mailed to participants or published in the *Journal*; and (4) luncheon expenses of the speakers.

II. Notify Governor Stratton that the ISMS is interested in active participation in the state conferences on aging, and urge him to include the ISMS in any discussion of aging problems since aging is a medical as well as a social problem. The White House Conference on Aging will

be held in 1961, and state conferences will be held in preparation for the White House meeting. The agency in charge of the Illinois Conference has not been determined, but Governor Stratton should be notified of the intention and desire of the ISMS to participate.

III. Approve the ISMS participation in the formation of a Joint Council on Aging and authorize the Committee to take immediate steps toward the formation of such a Council.

IV. That a paper be sponsored by the Committee and published in the Illinois Medical Journal four times a year. These papers would review the various problems of aging and would be written by a committee member or guest.

V. Authorize the Postgraduate Medical Education and Scientific Service Committee to include the subject of aging on postgraduate conference programs.

VI. Assist in the distribution of the booklet "Strike Back at Stroke" prepared by the USPHS and available to both physicians and patients from the Department of Public Health. Dr. Ruth E. Church (deputy director) stated: "The department is willing to provide physicians with a single copy for their review; however we do not feel that we should provide them with sufficient copies to distribute to their patients—that should be done from some other source such as the doctor is purchasing his own supply if he finds that he can use it. We will provide the funds for mailing the single copy to the physician upon his request for the book."

By special action, the Council approved each item presented by Dr. Cannady and extended commendation for the excellent work accomplished by his committee.

CONSTITUTION AND BYLAWS

Dr. O'Neill reported that the special committee to study suggested changes in the Constitution and Bylaws had met. The first resolution to be studied by the special committee, was the Winnebago County resolution providing for a limited tenure of office for members of the Council. Each member of the Council had been asked to contact all county medical society officers and delegates and alternates in his district and ask for an expression of opinion. The Committee sent letters to surrounding states (Wisconsin, Missouri, Kentucky, Iowa, and Indiana) and also to some of the larger state societies, (California, New York, and Pennsylvania) to see what is

provided under their C. and B. L. Dr. Goodyear tabulated the returns based upon either a county society officer's report or a delegate's report (which is about the same in the downstate area, since few county societies have more than one delegate). The result expressed was that about three out of five desired no change.

There is no limit to the tenure of office of Councilors in New York, Pennsylvania, or California. Three terms of three years were provided in two states, and one state had two terms of five years each. Iowa had a tenure of office but at the last meeting of their House, removed it from their Constitution. The special committee met with the Society Committee on Constitution and Bylaws and discussed this problem in detail. Members of the Council stressed the importance of the delegates from each Councilor District being given an opportunity to select the Councilor from the area; several of the Council members stated that if the delegates in any Councilor District didn't want the Councilor in office, they had ample opportunity to present another candidate. The District should be autonomous and all county societies and their delegates should have ample opportunity to discuss this suggested change and be well informed before the meeting of the House next May.

MOTION: (that a report be prepared by the special committee dealing with the suggested change in the Constitution, mimeographed, and mailed to each delegate and alternate prior to the meetings of the House of Delegates. Motion carried.)

MOTION: based upon the results tabulated by Dr. Goodyear, the Council does not recommend that a tenure of office be imposed upon Councilors. Motion carried.

Dr. Reichert stated that one of the main reasons why the Council has recommended no change in tenure of office at this time, is that the management survey will be made, and in light of this proposed survey, no change is recommended until a report has been received from the survey company.

Dr. O'Neill stated that for this same reason, the special committee and the Committee on Medical Service and Public Relations ask that action be deferred in regard to the suggested change pertaining to this committee.

Dr. Bornemeier presented eight to ten changes in the Constitution as a result of action taken by

the AMA recently. He is to prepare this material and it is to be sent to delegates and alternates and be printed in the Handbook for the House. The Council approved the changes he presented in principle and as soon as the material is available it will be mimeographed and sent out.

RETIREMENT PLANS FOR EMPLOYEES

Dr. Hesselstine reported as chairman of the special committee appointed to study and develop a retirement plan for employees of the state society. Dr. Hesselstine stated that the plan was based upon eight employees (Dr. Camp was not considered, as his retirement will be handled separately). The proposed plan will provide the employee with approximately 40 per cent of his last year's salary (minus social security payments received) and will be based upon a 10-11 per cent participating contribution. For the eight people involved, such a plan will cost about \$4,400 annually. The committee recommends that the Council approve this outline in principle and that such a retirement program be put into effect by January 1, 1960. The plan will carry compulsory participation for the employees after an individual has been with the Society for from one to three years.

SPECIAL JOURNAL COMMITTEE

Dr. English reported that the special committee to study the Journal and its problems had met, and had developed four recommendations. At his suggestion, the report is to be placed on file in the secretary's office and turned over to the consultants conducting the management survey for their consideration.

ANNUAL MEETING ACTIVITIES

Dr. Allison Burdick reported that as General Chairman of the Committee on Arrangements, the local committees were being appointed. Also it is recommended that the section officers hold office two years as secretary, then two years as chairman, so that we can develop continuity in the program planning. Also Dr. Burdick suggested that a luncheon meeting be held for all section officers on the opening day of the meeting to thank them for the work done, and to develop co-operation and interest during the session.

AMA CONFERENCE IN PITTSBURGH

Dr. O'Neill reported attending the AMA conference in Pittsburgh planned by the Committee

on Insurance — a subcommittee of the PR Division of the AMA. This was a regional meeting composed of New York, New Jersey, Virginia, Ohio, Illinois, and Indiana, and was the first of a series of meetings planned. One item that received serious consideration was the threat of withdrawal on the part of certain unions from Blue Shield plans to start their own service coverage. This is true of the steel workers and UAW. The committee wanted to know what might be done to combat this intention and a further report will be made at Atlantic City. Unions want all comprehensive coverage and will work toward this goal.

Another item that received serious consideration was the subject of our senior citizens and the available coverage for this group (hospitalization and medical-surgical coverage). Blue Shield and Blue Cross plans should work toward providing coverage for this older group. The three Blue Shield plans in Illinois should be asked to consider this problem carefully and do whatever possible to develop plans for the elderly residents of Illinois.

MOTION: O'Neill-Hesselstine) that the three Blue Cross-Blue Shield plans in Illinois be asked to develop and make available such coverage for senior citizens in this state. Motion carried.

SCHOOL HEALTH PROBLEMS

Dr. Fullerton reported on the Committee on School Health of the State of Illinois, and the meetings he had attended since last November. The setup for health education and the preparation of primary and secondary teachers in respect to health education received consideration. Hygiene courses at the University of Illinois have been dropped as a required subject for all students. The uniform health report for the physical examinations required by the state for the first, fifth, and ninth graders were considered also. Dr. Reichert stated that this work ties in with the White House Conference; that members of the medical profession have let lay educators carry the ball, have not expressed sufficient interest in this field, and that the crying needs is for more medical participation in school health problems.

The following physicians were elected to Emeritus and Retired membership:

EMERITUS:

Robert L. Borchert, Chicago C.M.S.
B. Raymond Cole, Mattoon Coles-Cumberland

William L. Gregg, Chicago	C.M.S.
J. Roscoe Harry, Chicago	C.M.S.
John J. Hopkins, Decatur	Macon
Edwin N. Nash, Galesburg	Knox
Edmon Richardson,	
Mattoon	Coles-Cumberland
Robert Z. Sanders, Decatur	Macon
William G. Wallace, Mattoon	Coles-Cumberland

RETIRED:

Joseph H. Chivers, Los Angeles, Calif.	C.M.S.
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Urban V. Comes, Chicago	C.M.S.
Marshall D. Hayes, Chicago	C.M.S.
Anna I. Robinson, Thiensville, Wisconsin	C.M.S.

The next meeting of Council will be held Sunday, April 26.

The Council adjourned at 3:30 p.m.

Respectfully submitted,
HAROLD M. CAMP, M.D., Secretary

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Stool-gazing

The first timid and tentative steps in stool-gazing were taken in Europe some 70 years ago when Biedert began to take notice of foods and feces, the intake-output complex. In the 1910's and 1920's the cult, then graced by the term clinical coprology, reached its zenith, particularly on the continent. There was preoccupation with the stools almost to the exclusion of the infant who passed them. Truby King (1918), for example, agreed with the dictum that "the first question in almost every disease in children should be, 'What are the motions like?'" Indeed, he agrees that "if we could keep the motions always normal, we should have very few or no delicate children."

Today the threescore years and ten of the stool-gazing fraternity is all but over. It is the end of an era, but not quite the end. Many nurses, for example, are still much concerned with the condition of the stools, and even intelligent mothers are terrified of green diarrhea and change an infant's feed at the slight sign of a green stool. Some unfortunate infants are fed

on black tea or glucose water for days on end, for no other reason than that their stools are greenish or loose. Mothers not only believe that their offspring must have satisfactory daily evacuations, but the popular press, intent on selling various nostrums, fosters this delusion. "Don't forget," warns an official Canadian government booklet, "that a baby's bowels need regular attention" (Couture, 1950). Rather like the regular lubrication needed by an automobile engine. "The poor intestines," wails Bergen Evans (1947), "victims of a thousand theories, are convulsed by poisonous drugs, drenched with mineral oils, and lacerated by roughage until they frequently abandon all effort to function." Truby King insisted on a daily bowel movement with a fervor so intense that its necessity might have been inscribed on the very tablets of the law handed down on Sinai. Hill (1922) was prepared to allow an infant a latitude of 48 hours. Today the public still has difficulty in understanding a doctor who evinces little interest in a baby's stools. *S. Levin, M.D. Stool-Gazing. Brit. M.J. Aug. 23, 1958.*



Can The Liberal Tide Be Turned?

MR. ROBERT R. NEAL, WASHINGTON, D.C.

CONSERVATIVE elements of the profession, business, and agriculture are concerned over current trends. A liberal Congress was elected last November. The Senate is comprised of 64 Democrats and 34 Republicans. The House has 282 Democrats and 153 Republicans. It will be noted that on matters decided strictly on party lines, the Democrats are within two votes in the Senate and nine votes in the House of the two-thirds majority necessary to override a veto.

Organized Labor has announced that it expects this Congress to respond to labor's efforts in the election by passing its legislative program. Third on the AFL-CIO legislative agenda is the expansion of the Social Security system to include hospital and medical benefits to OASI beneficiaries and their dependents.

I attended a gathering not long ago that reviewed broadly the nature of current trends and the economic outlook. Of primary concern is the government's unbalanced budget. The current view is that the administration will have a difficult time trying to stay within a balanced budget and avoid the inflationary pressures of deficit financing. Second, there is deep concern over such considerations as government infringement

upon free economic forces, expansion of federal powers in Social Security, and prospective labor legislation involving minimum wages, the wage and hour law, and the Taft-Hartley Amendments. These also have within them certain inflationary pressures.

Next to the over-all threat of inflation to the future of our economy, expansion of federal activities in Social Security holds the most immediate threat to the basic philosophy and common interests in which medicine and insurance are partners. Where do we stand?

As a nation, we are now enjoying the highest quality of medical care. This fact is reflected not only in a longer life span but also in the increasing volume of hospital, physician, and other services that make up the nation's health bill of more than 14 billion dollars.

This bill is paid by the consumer, principally from two sources: (1) from earnings or savings and (2) our voluntary health insurance system.

The increasing popularity of voluntary health insurance is demonstrated by the fact that today over 121 million persons are protected by some form of hospital expense insurance, nearly 10 times as many as in 1940. About 109 million have some form of surgical expense insurance, 20 times the 1940 figure. Almost 72 million have regular medical expense insurance, or 24 times the number in 1940.

General Manager, Health Insurance Association of America.

Presented before the North Side Branch Chicago Medical Society, February 5, 1959.

These data are significant in that they reveal the public's demand for a mechanism through which a substantial portion of the cost of the improved and increased medical care may be financed. It is inevitable that this demand will be filled. We are faced with the critical question of how this will be accomplished; whether through a government operated or a voluntary system. The future actions of insuring organizations and of the providers of hospital and medical care will influence the outcome of this issue.

Insuring organizations have the primary responsibility for (1) making coverage available to all who want and can afford to buy it, and (2) providing broad coverage at a reasonable cost.

Today, about seven out of 10 persons have some form of health insurance. The significance of this fact is more apparent when we remember that the remaining 30 per cent are those who do not need, want, or believe in health insurance for religious and other reasons; and others who are institutionalized in government financed mental, chronic illness, or tuberculosis hospitals or who receive care from the VA, Medicare, or other government sponsored programs. Additional progress will be made in this area with the development of new methods for extending the economies of group insurance to more people and extending coverage to physically impaired risks and our senior citizens.

The problem of financing hospital and medical care for the retired aged is a subject of real concern, not only because of its social and political significance, but also because it is the point on which the survival of our entire voluntary system of providing and financing health care may be resolved. Here is where implementation of the AMA's fine resolution adopted in Minneapolis and the principles adopted by the member companies of HIAA will be effective.

Here are the principles and the principal methods for providing health insurance for older persons:

- a) Continuation of insurance on older active workers under group insurance plans.
- b) Continuation of group insurance on workers who retire and their dependents, generally with part or all of the premium paid by the employer.
- c) Continuation, on an individual policy or contract basis, of coverage originally provided by group insurance, this being ac-

complished by conversion of the group coverage on termination of employment or membership in the insured group.

- d) New issuance of group insurance on such groups of older people as associations of retired persons or employees, retired teachers and civil servants, and Golden Age Clubs.
- e) Continuation into the later years of individual insurance purchased at the younger ages.
- f) New issuance of individual insurance at advanced ages.
- g) Issuance of insurance that becomes paid up at age 65, thus enabling the policyholder to pay for his protection during his productive years.

As to the current status of voluntary insurance coverage for the elderly, the number of older people having some form of health insurance today is not known precisely. Generally, it is accepted that at least 40 per cent of persons over 65 now have some health insurance coverage.

Much progress has been made during the past decade. For the 10 year period (1946-1956) the population in the 65-69 age bracket covered by hospital expense insurance increased from 15 to 48 per cent; in the 70 and over bracket, the increase was from 5 to 30 per cent.

Only a minor part of the problem should be the government's responsibility. About 18 per cent of the aged are public welfare recipients under the federally aided public assistance programs and, as such, are eligible to receive health care. This group is and properly should be primarily the responsibility of state and local governments. The complex and changing patterns of medical and hospital care, with their increased cost, are influencing the design of health insurance coverage. While in the main the insurance in force today still conforms to the basic hospital, surgical, and medical care approach, a need has emerged clearly for more comprehensive coverage.

There are many variations in the details of how this need should be filled. However, within the insurance industry there is general agreement on the following principles:

- (1) The plan should cover virtually all types of medical, hospital, and other usual expenses which may be encountered during the course of an illness, recognizing the

wide range of technical skills, medical techniques, and expensive drugs involved in modern medicine. This avoids the situation where the form of coverage influences medical practice—e.g., in patient confinements for diagnostic purposes only.

- (2) The insured should share in the total expense (exclusive of the premium) so that premium costs might be maintained at a reasonable level. The extent of his financial participation is determined by deductible and co-insurance provisions.

The deductible requires the insured to pay a stipulated amount (\$25, \$50, \$100, etc.) of the initial covered expenses. In this manner, the lower cost illnesses that are relatively expensive to handle administratively are screened out, leaving the bulk of the premium dollar to cover the larger expenses of more severe illness which may be such a hardship to the individual.

Similarly, co-insurance—by requiring the insured to finance 20 or 25 per cent of the expenses in excess of the deductible—discourages demands for luxury accommodations or other unnecessary services that would otherwise inflate premium costs beyond a reasonable level.

The need for the broader forms of health insurance protection is well established. Major medical insurance is one of several alternatives available to the public. The fact that major medical recognizes that primary responsibility for the quality of care rests with the providers of service, and otherwise supports the physicians' principles of the free practice of medicine, establishes a relationship between the success of major medical and your own personal interests. If you accept this analogy and the economic fact that survival of the comprehensive and major medical approach will be determined by its ultimate cost to the public, then the physician's and hospitals' relationship to that cost becomes a prime consideration to you.

We have previously observed that the deductible and co-insurance principles establish financial incentives for the insured which, if effective, will enable cost to remain at a reasonable level. However, in order for them to be effective, there must be complete understanding of and support for these principles among members of the medical profession and hospital field. Furthermore, it must be recognized that the practicing

physician or surgeon has primary responsibility in controlling the quantity of medical services and establishing the fee for his services. To this extent, he oversees directly this part of the premium cost to the public. There is no intent to interfere in the normal patient-physician relationship as it affects quantity and cost of service. However, it is vitally important that both considerations be resolved on criteria other than the existence or amount of insurance.

This fundamental axiom is readily understandable if we examine a hypothetical case in which the existence of insurance is the only variable in an otherwise parallel set of circumstances.

Mr. A. and Mr. B. are at similar economic levels. They use the same services of the same physician for like illnesses. Mr. A. owns health insurance. Mr. B. does not. If Mr. A. is charged a higher fee solely due to the presence of insurance, the resulting higher charge for the insured class as a whole would ultimately argue against that form of prepayment, and for some other alternative that would exercise more control over the fee charged.

This situation is an oversimplification of the problem. It is used merely to illustrate the direct relationship between physician's fees and insurance costs and why it is important that the physician establish his fee as if there were no health insurance. Also, it is a measurement of the effectiveness of different kinds of voluntary health insurance that is being used with increasing frequency by an informed public.

There is an important underlying difference between major medical and the basic forms of hospital and medical coverages which critics contend will in the long run serve to inflate the cost of medical care and ultimately, price this form of coverage out of the market. This is the fact that major medical relies on financial incentives such as deductibles and co-insurance and the medical profession's enlightened self-interest rather than the built-in controls that stem from the lower dollar limits and narrower scope of insured services under the so-called basic forms of protection.

We cannot avoid coming to grips with this possibility, for it is indeed a vulnerable area. The integrity of the medical profession makes me confident that it will not become a reality. However, we must respond to this challenge together, with a full recognition of our relative

responsibilities, and a willingness to fulfill them forthrightly.

On your part, there is a need to control and prevent inflation of costs, and particularly to prevent inflation from occurring merely because of the existence of insurance.

On our part, insurance has a responsibility to be of every reasonable assistance and to see that it does not encourage directly or indirectly practices that will result in increasing costs and price prepayment out of the market.

To this end strong liaison between the medical profession and insurance should be maintained in areas where our joint interests and concerns must be preserved. This should be an integrated and co-operative effort at the county and state as well as the national level.

To strengthen our ability to work together, state insurance committees have been organized under the guidance of the Health Insurance

Council in almost every state. In Illinois, that committee is under the chairmanship of Clem Martin, M.D., Medical Director, Continental Casualty Company. Dr. Martin and his associates stand ready to provide information and technical and practical counsel regarding health insurance coverages to all groups concerned with health services.

It has been ably stated that all legitimate voluntary approaches to financing health care costs are equally entitled to the enthusiastic support and co-operation of medicine. Medicine has recognized that voluntary health insurance is the sound and practical device for financing health care costs within the structure of private enterprise. We look forward to sharing with you the joint responsibility for its successful operation. Only through performance will that liberal tide be turned.

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The early detection of emphysema

The complication of emphysema is well recognized in patients with bronchial asthma. It is important to detect the development of this complication as early as possible. Attention is called to a recent study of the detection of early emphysema. The same screening tests were used in the study of these asthmatic patients. The criteria for emphysema are a combination of prolonged timed vital capacity (two seconds less than 90 per cent), elevation of the maximum breathing spirogram toward hyperinflation level and abnormal single breath oxygen test (greater than 2 per cent). Applying these criteria to this series of patients with bronchial asthma, it was found that 84 per cent had evidence of emphysema. Of this group only 70 per cent had

X-ray interpretation of emphysema although PA and lateral films of the chest were available. The poor correlation of X-ray interpretation of emphysema with clinical findings has been commented upon by Knott, J. K. Curtis, M.D. et al. *Pulmonary Function Screening Tests in Bronchial Asthma*. Dis. Chest Dec. 1958.

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Fragile infants

Babies born of diabetic mothers need special attention and it is wise for the pediatrician to be present at the time of delivery. These babies should be treated as if they are in shock. They should be handled gently, have their airway cleared, their stomach pumped, and be placed in an incubator and cared for in the premature nursery. Robert D. Arnold, M.D. *Diabetes with Pregnancy*. J. Indiana M.A. Oct. 1958.

CORRESPONDENCE



Am. College of Physicians to hold meeting in Chicago

Two theaters as well as the huge facilities of the Conrad Hilton Hotel in Chicago will be required to present the scientific program at the 40th annual session of the American College of Physicians, April 20-24, it was announced by Dr. Eliot E. Foltz of Winnetka, general chairman.

The authors of the more than 100 formal papers and the participants in 23 panels will include faculty members from medical schools in all parts of the United States. The subjects will cover every important medical problem.

Two-hour clinics will be held every morning in the following hospitals: Billings, Chicago Wesley Memorial, Cook County, Evanston, Mercy, Michael Reese, Mount Sinai, Passavant Memorial, Presbyterian-St. Luke's, University of Illinois Research and Educational, St. Luke's, VA Research, and VA West Side.

This will be followed by panels in the hotel and in the Blackstone and Eighth Street Theaters. At the same time, clinical-basic science case reports will be held in the hotel.

The general clinical sessions will be held simultaneously in the afternoon from 2 to 5 o'clock, at both the Conrad Hilton Hotel and the Blackstone Theater.

Color television programs originating in the Cook County Hospital will be shown on large screens in the Conrad Hilton Hotel.

A new feature will be a public meeting to which business, civic, and nonmedical professional leaders will be invited. A panel will discuss "The Care and Preservation of the American Executive." The panelists will be Drs. Philip S. Hench, Henry L. Bockus, William C. Menninger, Chester M. Jones, Sara M. Jordan, Howard F. Lewis, Irvine H. Page, and Walter L. Palmer. Dr. Dwight L. Wilbur of San Francisco, president of the College, will be moderator.

The annual business meeting will be held on Thursday afternoon. Dr. Howard P. Lewis of Portland, Ore., will be inducted as president to succeed Dr. Wilbur. The annual convocation, with its impressive academic ceremonies, will be held on Wednesday evening.



Annual clinical and scientific meeting Illinois Surgical Society

Monday, May 18, 1959

8:00 a.m. SURGICAL CLINICS AT THE
COOK COUNTY HOSPITAL

7th Floor—Harrison and Wood
Streets—Chicago

CHAIRMAN of Surgical Symposium—William Johnson, Galesburg
President, Illinois Surgical Society

SURGICAL AMPHITHEATRE

8:00 "Gastrectomy for Duodenal Ulcer"
Surgeon: Karl A. Meyer

	Discussors: Peter A. Rosi and Kenneth H. Schnepf	Resection for Carcinoma of the Colon"	
9:30	"Blood Transfusions of the Surgical Patient"	Surgeon: John B. O'Donoghue	
	Indications, Blood Volume Estima- tion, Contraindications, etc.	Discussors: Raymond J. Kennedy and Joseph Silverstein	
	J. Garrott Allen	OPERATING ROOM "B"	
	Discussors: Harry A. Oberhelman and Clement P. O'Neill	8:00 to	
9:55	"Toxicity of Antibiotic Therapy in the Surgical Patient"	10:00	"Vaginal Hysterectomy"
	Infections, Abscesses, etc.		For Prolapse, Plastic Repair of the Perineum.
	Robert L. Schmitz		Surgeon: Walter Reich
	Discussors: Lorin D. Whittaker and James E. Graham		Discussors: Charles F. Fildes and Thomas W. Samuels
10:20	"Complications with the Use of Ster- oids in the Surgical Patient"	10:00 to	
	Eugene F. Traut	12:00 a.m.	"Abdominal Hysterectomy"
	Discussors: Harrison C. Putman and Roy E. Brackin		For Fibrosis of the Uterus
10:45	"Acute Pancreatitis"		Surgeon: August F. Daro
	Surgical Complications, Pain, Treat- ment		Discussors: Edwin S. Hamilton and Percy E. Hopkins
	Charles B. Puestow	1:00 to	
	Discussors: Leon J. Aries and Peter C. Rumore	3:00 p.m.	"Radical Mastectomy for Carcino- ma"
11:10	"Problems of Intestinal Obstruction"		Surgeon: Louis P. River
	Diagnosis, Treatment		Discussors: Clifford L. Carter and Charles P. Blair
	J. C. Thomas Rogers	OPERATING ROOM "C"	
	Discussors: Everett P. Coleman and Earl O. Latimer	8:00 to	
11:35	"Fractures in the Pediatric Patient"	10:00	"Inguinal Hernia"
	Diagnosis, Treatment		Use of mesh, etc.,
	Robert T. McElvenny		Surgeon: William M. McMillan
	Discussors: Edward L. Compere, William F. Fritsch and George L. Apfelbach		Discussors: Chester C. Guy and Norman Parry
1:00	"Skin Transplantation of the Burned Patient"	10:00 to	
	Cornelius N. Annan	12:00	"Ventral Hernia"
	Discussor: John J. Schneewind		Use of Fascia Lata as a Transplant in the Repair
2:00	"Emergency Treatment of Frac- tures"		Surgeon: E. Lee Strohl
	Surgeon: James J. Callahan		Discussors: Reginald M. Norris, and Harold F. McGinnes
	OPERATING ROOM "A"	1:00 to	
	8:00 to	3:00 p.m.	"Abdominal Trauma—Penetration, Non-Penetration"
12:00	"Treatment of Thoracic Injuries"		Diagnosis, Management, and Treat- ment
	Surgeon: George W. Holmes		Surgeon: Nicholas J. Capos
	Discussors: Robert A. Debord and John Brosnan		Discussors: Charles C. Christie and Arthur D. Poppen
1:00 to		OPERATING ROOM "D"	
3:00 p.m.	"Abdominal Perineal or Anterior	10:00 to	
		12:00	"Open Cardiac Surgery"
			Surgeon: Egbert Fell
			Discussors: Ormand J. Julian,

Paul F. Fox, Ward Eastman,
Gilbert Douglas

1:00 to

3:00 "Common Bile Duct Obstruction":
Surgeon: Manuel E. Lichtenstein
Discussors: Everett Nicholas and
Gilbert W. Douglas

OPERATING ROOM "E"

8:00 to

10:00 "Treatment of Urinary Complica-
tions Due to Trauma"
Surgeon: Knowlton Barber
Discussors: Thomas B. Carney
and Willis I. Lewis

10:00 to

12:00 "Perforated Diverticulum"
Diagnosis, Management.
Surgeon: Arkell M. Vaughn
Discussors: Edwin A. Crowell and
James W. West

1:00 to

3:00 "Gastrectomy"
New Technique to Prevent "Dump-
ing Syndrome"
Surgeon: Morris T. Friedell
Discussors: John B. Condon and
David A. Bennett

MEDICAL AMPHITHEATRE

1:00 to

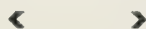
3:00 "Unusual Surgical Cases"
Paul B. Szantos
Discussor: Howard H. Hamlin

SCIENTIFIC MEETING—Monday Evening, May 18, 1959

8:00 p.m. University Club at Michi-
gan Avenue and Monroe Street,
Chicago

"Respiratory Emergencies and Com-
plications in Pediatric Surgery"
Willis J. Potts

Discussor: Hiram T. Langston
The Iowa Academy of Surgery will
be guests at this meeting. Members
of the medical profession are invited
to all sessions.



Clinics for crippled children listed for May

Twenty-four clinics for Illinois' physically
handicapped children have been scheduled for

May by the University of Illinois, Division of
Services for Crippled Children. The Division
will count 19 general clinics providing diagnostic
orthopedic, pediatric, speech, and hearing ex-
amination along with medical, social, and nurs-
ing service. There will be two special clinics for
children with cardiac conditions, one for chil-
dren with rheumatic fever, and two for cerebral
palsied children.

Clinics are held by the Division in co-opera-
tion with local medical and health organizations,
both public and private. Clinicians are selected
from among private physicians who are certified
Board members. Any private physician may refer
to or bring to a convenient clinic any child or
children for whom he may want examination
or consultative services.

May 1 — Chicago Heights (Cardiac), St. James
Hospital

May 5 — Casey, Casey High School

May 5 — Macomb, St. Francis Hospital

May 5 — Pittsfield, Illini Hospital

May 6 — Fairfield, Fairfield Memorial Hospital

May 6 — Hinsdale, Hinsdale Sanitarium

May 7 — Monticello, Lincoln School

May 7 — Sterling, Community General Hospital

May 12 — East St. Louis, St. Mary's Hospital

May 12 — Peoria, Children's Hospital

May 13 — Joliet, Silver Cross Hospital

May 14 — DuQuoin, Marshall-Browning Hos-
pital

May 14 — Springfield, St. John's Hospital

May 19 — Alton, Alton Memorial Hospital

May 20 — Aurora, Copley Memorial Hospital

May 20 — Evergreen Park, Little Company of
Mary Hospital

May 20 — Rock Island (Cerebral Palsy), Foss
Home, 3808 Eighth Avenue

May 21 — Carlinville, Carlinville Area Hospital

May 21 — Elmhurst (Cardiac), Memorial Hos-
pital of DuPage County

May 21 — Rockford, Rockford Memorial Hos-
pital

May 26 — Effingham (Rheumatic Fever), St.
Anthony Hospital

May 26 — Peoria, Children's Hospital

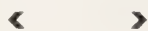
May 27 — Springfield (Cerebral Palsy), Mem-
orial Hospital

May 28 — Decatur, Decatur-Macon County Hos-
pital

Examination in O. & G.

Part II oral and clinical examinations for candidates to the American Board of Obstetrics and Gynecology will be conducted at the Edgewater Beach Hotel, Chicago, May 8-19.

The deadline for applications for the 1960 examinations is August 1, 1959. These should be submitted to Dr. Robert L. Faulkner, 2105 Adelbert Road, Cleveland 6.



Award for work in O. & G.

The Central Association of Obstetricians and Gynecologists is offering an award of \$250 for outstanding investigations or clinical work in obstetrics and/or gynecology. The deadline for the submission of papers is June 25.

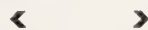
For information, write to Dr. Edwin J. DeCosta, secretary, Central Association of Obstetricians and Gynecologists, 104 South Michigan Avenue, Chicago 3.



Neuromuscular disease course

The Cook County Graduate School of Medicine will present an intensive course in neuromuscular diseases of children, with special emphasis on cerebral palsy, June 15-26. The course, to be given by Dr. Meyer A. Perlstein, is designed for pediatricians, orthopedists, neurologists, psychiatrists, and physiatrists and will include trips to demonstration clinics and treatment centers.

For information, write to Mr. John W. Neal, registrar, Cook County Graduate School of Medicine, 707 South Wood Street, Chicago.



Courses in otolaryngology

The department of otolaryngology, University of Illinois College of Medicine will present two special postgraduate courses this fall. On September 18-26, it will conduct a series of lectures and panels in otolaryngology. The chairmen will be Drs. Maurice F. Snitman and Emanuel M. Skolnik. A course in laryngology and bronchoesophagology will be presented November 9-21 under the chairmanship of Dr. Paul H. Holinger.

For information, write to Dr. Francis L. Lederer, head of the department of otolaryngology, University of Illinois College of Medicine, 1853 West Polk Street, Chicago 12.

U. I. medical alumni to hold seminar

The University of Illinois Medical Alumni Association will hold its 4 semiannual medical seminar Monday, May 18.

The annual alumni banquet in the Chicago Ilini Union will follow the day's program of seminars, lectures, and clinics. Officers for 1959-60 will be elected and class reunions will be celebrated by the classes of 1904, '09, '14, '19, '24, '29, '34, '39, '44, '49, and '54. Highlighting the evening will be an address by Dr. Gordon N. Ray, vice president and provost of the university.

The following program is planned.

- 9:00 A.M. Registration
- 9:30 A.M. Lecture: "Malpractice Prophylaxis," Charles M. Rush, Attorney
- 10:00 A.M. Question and answer.
- 10:15 A.M. Panel: "Bleeding Peptic Ulcer."
- 10:45 A.M. Question and answer.
- 11:00 A.M. Intermission
- 11:15 A.M. Lecture: "Current Drug Therapy of Hypertension."
- 11:45 Noon Question and answer
- 1:00 P.M. Luncheon
- 2:30 P.M. Clinics: Departments of Medicine, Surgery, Pediatrics, and Obstetrics and Gynecology
- 5:00 P.M. Social hour
- 6:30 P.M. Alumni banquet

The program is provided by College of Medicine staff members and is co-sponsored by the Medical Alumni Association and the College of Medicine.

Alumni and guests are invited. For further information write Dr. Louis R. Limarzi, associate professor of medicine, Room 216, University of Illinois Research and Educational Hospital, Chicago 12.



School in chest diseases

The Trudeau School of Tuberculosis and Other Pulmonary Diseases will hold its 44th session at Saranac Lake, N. Y., June 8-26. A postgraduate course in chest diseases will be offered. The faculty will consist of about 70 leading teachers and investigators.

For information, write to the secretary, Box 500, Saranac Lake, N. Y.

PRELIMINARY PROGRAM
for the
One Hundred Nineteenth
ANNUAL MEETING
of the
ILLINOIS STATE MEDICAL SOCIETY



May 19, 20, 21, 22, 1959

Hotel Sherman

Chicago

PROGRAM SUMMARY

MONDAY, MAY 18

p.m.

7:30 Credentials Committee

8:30 First meeting of the HOUSE OF DELEGATES, Louis XVI Room

TUESDAY, MAY 19

9:00 Section on Obstetrics & Gynecology, Crystal Room

9:00 Section on Cardiovascular Disease, Old Chicago Room No. 101

9:00 Section on Eye, Ear, Nose and Throat, Ruby Room No. 113

10:00 REFERENCE COMMITTEES

10:00 Reports of Officers and Councilors, Gold Coast Room No. 111

10:00 Reports of Standing Committees, Orchid Room No. 106

10:00 Reports of Council Committees No. 1, Jade Room No. 103

10:00 Reports of Council Committees No. 2, Polo Room No. 102

10:00 Reports of Council Committees No. 3, Holiday Room No. 105

10:00 Reports of Council Committees No. 4, Life Room No. 108

10:00 Miscellaneous Business, Time Room No. 110

12:00 Fifty Year Club Luncheon, Assembly Room

1:30 General Assembly, The Ballroom

3:30 Section on Radiology, The Crystal Room

3:30 Section on Anesthesiology, Old Chicago Room No. 101

6:30 Public Relations Dinner, G.B. Shaw Room

WEDNESDAY, MAY 20

8:00 Women Physicians' Breakfast, Orchid Room No. 106

9:00 Section on Pediatrics, Louis XVI Room

9:00 Section on Surgery, Crystal Room

9:00 Section on Eye, Ear, Nose and Throat, Ruby Room No. 113

9:00 Illinois Chapter, American College of Chest Physicians, Assembly Room

9:00 Physicians' Association, Department of Public Welfare, Gold Room No. 114

10:30 Reference Committee meetings as needed

11:45 Illinois Academy of General Practice Luncheon, Old Chicago Room No. 101

12:00 Illinois Chapter, American Academy of Pediatrics — Luncheon, Louis XVI Room

12:00 Illinois Chapter, American College of Chest Physicians — Luncheon, Assembly Room

1:30 General Assembly, The Ballroom

7:00 The Annual Dinner, The Ballroom

THURSDAY, MAY 21

9:00 Second meeting HOUSE OF DELEGATES, Louis XVI Room

9:00 Section on Dermatology, Old Chicago Room No. 101

9:00 Section on Preventive Medicine & Public Health, Assembly Room

9:00 Section on Medicine, Crystal Room

9:00 Section on Allergy, Gold Room No. 114

12:00 Section on Dermatology — Luncheon, Old Chicago Room No. 101

12:00 Section on Preventive Medicine & Public Health — Luncheon, Assembly Room (with other groups as listed on program)

12:00 Section on Medicine — Luncheon, Crystal Room

12:00 Section on Allergy — Luncheon, Ruby Room No. 113

12:00 Phi Chi Luncheon, Life Room No. 108

1:30 General Assembly, The Ballroom

6:30 Loyola Alumni Banquet, Crystal Room

FRIDAY, MAY 22

8:30 Third meeting HOUSE OF DELEGATES, Louis XVI Room

9:00 Section on Pathology, The Crystal Room

9:00 American College of Surgeons, Symposium on Trauma, Assembly Room

12:00 Section on Pathology — Luncheon, Old Chicago Room No. 101

2:00 Illinois Association of Blood Banks, Crystal Room

HOUSE OF DELEGATES

Louis XVI Room — 1st Floor

(1) MONDAY, MAY 18

8:30 p.m. The first meeting of the House of Delegates will be called to order by the president, Raleigh C. Oldfield, for:

The reports of officers, councilors, committees, etc., and supplementary reports where indicated;

The introduction of resolutions, and the transaction of any other business which may come before the House.

THE COMMITTEE ON CREDENTIALS will meet at 7:30 p.m. Monday evening, May 18, in the entrance way to the Louis XVI Room. Delegates desiring to be certified as the official representatives of their county medical societies must present their CREDENTIAL CARDS to this committee.

(2) THURSDAY, MAY 21

9:00 a.m. The second meeting of the House of

Delegates will be called to order by the president to hear those reports of reference committees ready to be presented.

(3) FRIDAY, MAY 22

8:30 a.m. The third (and last) meeting of the House of Delegates will be called to order by the president to hear the remaining reports of reference committees;

For the election of officers, councilors, committee members, delegates and alternate delegates to the American Medical Association, and

For the transaction of any other business to come before the House.

At the close of this last meeting, Joseph T. O'Neill will be installed as the new president of the Illinois State Medical Society, and will receive the official gavel from the retiring president, Raleigh C. Oldfield.

PROGRAMS FOR TUESDAY, MAY 19, 1959

SECTION ON CARDIOVASCULAR DISEASE

Chairman . . Edward W. Cannady, East St. Louis
Secretary Ernest G. McEwen, Evanston
Tuesday Morning, May 19, 1959
Old Chicago Room No. 101

9:00 "The Prevention of Rheumatic Fever Recurrence"

Benjamin B. Berman, Granite City

9:20 "Problems in Learning from Clinical Experiences"

Eugene A. Stead, Jr., Durham, North Carolina, Professor and Chairman, Department of Medicine, Duke University Medical Center. Guest of Chicago Heart Association.

9:40 "Management of Acute Myocardial Infarction"

Theodore Z. Polley, Joliet, President, Illinois Heart Association

10:00 "The Evaluation of Older Patients with Cardiac Lesions Amenable to Surgical Treatment"

Robert O. Brandenburg, Rochester, Minnesota, Consultant in Medicine, Section on Cardiovascular Diseases, Mayo Clinic; Assistant Professor of Medicine, Mayo Foundation Graduate School, University of Minnesota

10:20 "Facts and Fancies in Treating Hypertension"

Ford K. Hick, Chicago, Professor of Medicine, University of Illinois College of Medicine

10:40 INTERMISSION TO VIEW EXHIBITS

11:00 PANEL SYMPOSIUM — with Section on Obstetrics and Gynecology, Crystal Room

"Cardiovascular Disease and Pregnancy"

MODERATOR: Wright Adams, Chicago, Professor of Medicine, University of Chicago; President, Chicago Heart Association

Robert O. Brandenburg, Rochester, Minnesota

Charles P. McCartney, Chicago, Associate Professor, Department of Obstetrics and Gynecology, University of Chicago

William F. Mengert, Chicago, Professor of Obstetrics and Gynecology, University of Illinois College of Medicine

Eugene A. Osius, Detroit, Michigan, Chief of Surgery, Harper Hospital; Associate Professor of Surgery, Wayne University College of Medicine.

SECTION ON OBSTETRICS & GYNECOLOGY

Chairman Ralph N. Redmond, Sterling
 Secretary Michael H. Boley, Chicago
 Tuesday Morning, May 19, 1959
 Crystal Room

- 9:00 "The Use and Abuse of General Anesthesia in Obstetrics"
 Arthur T. Shima, Oak Park, Chief, Department of Anesthesia, West Suburban Hospital; Assistant Clinical Professor of Anesthesiology, University of Illinois College of Medicine
- 9:20 "Gynecological Emergencies"
 Zachary J. Romeo, Rock Island, Chief, Department of Obstetrics and Gynecology, St. Anthony's Hospital
- 9:40 "Obstetrical Emergencies"
 Willard C. Scrivner, East St. Louis, Assistant Clinical Professor, Obstetrics and Gynecology, Washington University School of Medicine, St. Louis
- 10:00 "Vascular Complications in Pregnancy"
 Eugene A. Osius, Detroit, Michigan, Chief Surgeon and Chairman, Department of Surgery, Harper Hospital; Associate Professor of Surgery, Wayne University College of Medicine
- 10:30 INTERMISSION TO VIEW EXHIBITS
- 11:00 PANEL SYMPOSIUM — With Section on Cardiovascular Disease, Crystal Room
 See "Section on Cardiovascular Disease" for panel program.

SECTION ON EYE, EAR, NOSE AND THROAT

Chairman C. L. Pannabecker, Peoria
 Secretary Wiley H. Harrison, Chicago
 Tuesday Morning, May 19, 1959
 Ruby Room No. 113

- 9:00 "Alpha-Chymotrypsin in Cataract Surgery"
 George J. Wyman, Peoria
- 9:20 "Strabismus"
 Eugene R. Folk, Skokie
- 9:40 "Eye Complications Resulting from Systemic Medication"
 Richard A. Perritt, Chicago
- 10:00 "Antibiotics — Trend in Eye, Ear, Nose and Throat"
 Mark H. Lepper, Chicago
- 10:30 Business meeting
- 11:00 ADJOURNMENT TO VIEW EXHIBITS

FIFTY YEAR CLUB LUNCHEON

Tuesday Noon, May 19, 1959
 Assembly Room

12:00 noon.
 Dr. Andy Hall, chairman of the Fifty Year Club since its formation in 1937, will preside again this year at the annual complimentary luncheon honoring the members of the Fifty Year Club.

All physicians who have been in the practice of medicine for fifty years or more will be guests of the Illinois State Medical Society at one of the most popular social functions held during the annual meeting.

Tickets for the luncheon are complimentary, and may be secured at the ticket desk during the morning, or from Dr. Hall.

THE GENERAL ASSEMBLY

Tuesday Afternoon, May 19, 1959
 The Ballroom

- Presiding Edward W. Cannady
 Assisting Ralph N. Redmond
- 1:30 Opening of the General Assembly
 Raleigh C. Oldfield, Oak Park, President, Illinois State Medical Society
- 1:40 "Current Concepts on Anesthesia in the Aged"
 Henry K. Beecher, Boston, Massachusetts, Professor of Anesthesiology, Harvard Medical School; Head of Department of Anesthesiology, Massachusetts General Hospital
- 2:00 "Roentgen Diagnosis of Benign Gastric Ulcer"
 Harold O. Peterson, Minneapolis, Min-

nesota, Professor and Head of Department of Roentgenology, University of Minnesota Medical School

- 2:20 "Some Comments on Treatment of Congestive Heart Failure"
 Robert O. Brandenburg, Rochester, Minnesota, Assistant Professor of Medicine, Mayo Foundation Graduate School, University of Minnesota
- 2:40 "Indications for Surgery in Middle Ear Deafness"
 Bruce Proctor, Detroit, Michigan
- 3:00 INTERMISSION TO VIEW EXHIBITS
 Presiding Reginald M. Norris
 Assisting C. L. Pannabecker
- 3:30 PANEL Discussion on Surgical Infection

MODERATOR: Sumner L. Koch, Chicago, Professor of Surgery Emeritus, Northwestern University Medical School

Frank L. Meleney, Miami, Florida, Professor Emeritus, Clinical Surgery, Columbia; Lecturer in Surgery, University of Miami

Eugene A. Osius, Detroit, Michigan, Associate Professor of Surgery, Wayne University College of Medicine

Manuel Lichtenstein, Chicago, Chairman, Department of Surgery, Cook County Hospital

SECTION ON ANESTHESIOLOGY

Chairman Arthur T. Shima, Oak Park

Secretary James Felts, Marion

Tuesday Afternoon, May 19, 1959

Old Chicago Room No. 101

3:00 "Orthopedic Anesthesia in the Aged"

J. Sassbinder, East St. Louis

3:30 "General Anesthetic Care of Older Patients in a Community Hospital"

Robert F. Finegan, Elgin

4:00 "Anesthesia for the Geriatric Urology Patient"

Paul W. Searles, Chicago

Digby G. Seymour, Chicago

SECTION ON RADIOLOGY

Chairman William Mezaros, Chicago

Secretary Bertil Roseberg, Rockford

Tuesday Afternoon, May 19, 1959

Crystal Room

3:30 The guest moderator of the film reading session planned by the Section on Radiology will be Harold O. Peterson, Minneapolis, Minnesota, the out of state guest of the Section.

PUBLIC RELATIONS DINNER

Tuesday Evening, May 19, 1959

George Bernard Shaw Room

6:30 p.m.

The eighth annual Public Relations Dinner, sponsored by the Committee on Medical Service

and Public Relations, will be held Tuesday evening, May 19, in the George Bernard Shaw Room.

Percy E. Hopkins, chairman of the committee, will preside.

PROGRAMS FOR WEDNESDAY, MAY 20, 1959

WOMEN PHYSICIANS' BREAKFAST

Wednesday Morning, May 20, 1959

Orchid Room No. 106

8:00 a.m.

On Wednesday morning, May 20, the women physicians registered at the 1959 annual meeting will be guests of the Illinois State Medical Society at a complimentary breakfast meeting.

This annual breakfast has been held for many years, and the women physicians have enjoyed a short program before the scientific sessions open at 9:00 o'clock.

The committee in charge this year is:

Augusta Webster, Chicago—Chairman, Gertrude M. Engbring, Chicago—Vice Chairman, Myrna F. Loth, Elizabeth A. McGrew, Johanna Heumann, Ruth E. Church, Barbara J. Hull

Tickets may be secured at the ticket desk on the mezzanine floor, or at the registration desk, until closing time on Tuesday evening, May 19.

SECTION ON PEDIATRICS

Chairman Lawrence Breslow, Chicago

Secretary Homer F. Weir, Rockford
Wednesday Morning, May 20, 1959

Louis XVI Room

9:00 "Hyperthyroidism in the Newborn Infant"

Jose Gonzales and A. Raymond Eveloff, Springfield

9:20 "Juvenile Rheumatoid Arthritis; Diagnosis and Treatment"

Ira Rosenthal and Priscilla C. Reyes, Chicago, University of Illinois College of Medicine

9:40 "Current Concepts in the Diagnosis of Thyroid Disorders"

Ralph H. Kunstadter, Chicago, Attending Pediatrician, Sarah Morris Hospital for Children, Michael Reese Medical Center

10:00 "The Celiac Syndrome"

Charles U. Lowe, Buffalo, New York Research Professor of Pediatrics, University of Buffalo School of Medicine

10:30 INTERMISSION TO VIEW EXHIBITS

11:00 "The Adenoid and the Syndrome of Pala-

to-pharyngeal Incompetence"

Edward F. Lis, Chicago, Associate Professor of Pediatrics, University of Illinois College of Medicine

11:15 "An Evaluation of Perinatal Factors in the Etiology of Cerebral Palsy, Mental Retardation, and Other Neurological Disorders"

Stewart H. Clifford, Boston, Boston Lying-In-Hospital, (Doctor Clifford appears under the auspices of the Illinois Chapter, American Academy of Pediatrics)

11:45 Business meeting.
Luncheon in Louis XVI Room
with Illinois Chapter, American Academy of Pediatrics

SECTION ON SURGERY

Chairman Reginald M. Norris, Jacksonville
Secretary John B. Condon, Chicago
Wednesday Morning, May 20, 1959

Crystal Room

9:00 "ACUTE VASCULAR EMERGENCIES
—Spontaneous and Traumatic"

MODERATOR: Robert A. DeBord,
Peoria

Senior Surgeon, St. Francis Hospital

(1) "Acute Thoracic Vascular Emergencies, Symptoms, Diagnosis, Treatment and Cardiac Arrest"

Egbert H. Fell, Chicago

Clinical Professor of Surgery, University of Illinois College of Medicine

(2) "Abdominal Aneurysms, Acute Vascular Obstructions; Symptoms, Diagnosis and Treatment"

Ormand C. Julian, Chicago

Professor of Surgery, University of Illinois College of Medicine

(3) "Acute Traumatic Vascular and Acute Obstruction (Vascular) of Extremities"

Geza DeTakats, Chicago

Clinical Professor of Surgery, University of Illinois College of Medicine

(4) "Congenital Vascular Problems: Symptoms, Diagnosis and Treatment"

Thomas G. Baffes, Chicago

Associate, Department of Surgery, Northwestern University Medical School

10:00 "TUMORS OF THE NECK — Symptoms, Diagnosis, Pathology and Treatment"

MODERATOR: Howard P. Sloan, Bloomington

(1) "Benign Tumors of the Neck"

Leon J. Aries, Chicago

Associate Professor of Surgery, Chicago Medical School.

(2) "Malignant Tumors of the Neck"

Lindon Seed, Chicago

Clinical Associate Professor of Surgery, University of Illinois College of Medicine

(3) "Use and Abuse of Radioactive Material"

William J. Pickett, Chicago

Clinical Professor of Surgery, Stritch School of Medicine, Loyola University

(4) "Tumors of the Thyroid Gland"

William M. McMillan, Chicago

Assistant Professor of Surgery, Northwestern University Medical School.

11:00 "ACUTE ABDOMINAL EMERGENCIES: Symptoms, Diagnosis and Treatment"

MODERATOR: Karl A. Meyer, Chicago
Professor (Emeritus) of Surgery, Northwestern University Medical School

(1) "Diagnosis and Treatment of Acute Intestinal Obstruction"

Walter G. Maddock, Chicago

Professor of Surgery, Northwestern University Medical School

(2) "Acute Biliary Tract Pathology; Symptoms, Pathology and Treatment"

Warren H. Cole, Chicago

Professor and Head of Department of Surgery, University of Illinois College of Medicine

(3) "Treatment of Massive Gastrointestinal Hemorrhage"

J. Garrott Allen, Chicago

Professor of Surgery, University of Chicago Medical School.

(4) "Acute Perforations of Viscus; Symptoms, Diagnosis and Treatment"

Richard H. Lawler, Chicago

Associate Clinical Professor of Surgery, Stritch School of Medicine, Loyola University

SECTION ON EYE EAR NOSE AND THROAT

Chairman C. L. Pannabecker, Peoria

Secretary Wiley H. Harrison, Chicago

Wednesday morning, May 20, 1959

Ruby Room No. 113

9:00 "Combination Reconstruction — Nose and Chin"

Ira J. Tresley, Chicago

9:20 "Tympanoplasty"

Bruce Proctor; Detroit, Michigan

10:00 "The Ultrasonic Management of Meniere's Disease"

Richard P. Ariagno, Chicago

10:20 "Malignancies of the Paranasal Sinuses"
 Delbert K. Judd, Kankakee
 10:40 "The Diagnosis and Management of Laryngocele"
 Kenneth Johnstone, Chicago
 11:00 ADJOURNMENT TO VIEW EXHIBITS

Illinois Chapter

AMERICAN COLLEGE OF CHEST
 PHYSICIANS

Wednesday morning, May 20, 1959
 Assembly Room

9:00 a.m.
 1. "What's the Diagnosis?"
 (Case presentations by various Chicago institutions)
 2. "Tuberculous Enterocolitis and Other Obstructive Lesions of the Bowel"
 Leroy Bernard, Chicago
 Chief of Medical Services, Municipal Tuberculosis Sanatorium.
 3. "Cycloserine in High Dosage in Salvage Cases of Pulmonary Tuberculosis"
 Marjorie M. Pyle, Chicago
 Chief of Medical Services, Chicago State Tuberculosis Sanatorium
 Karl H. Pfuetze
 William R. Barclay
 John E. Kasik
 4. "Pulmonary Hypertension Associated with Defects of the Interatrial and Interventricular Septa"
 H. J. C. Swan, Rochester, Minnesota
 Mayo Clinic

Luncheon

Illinois Chapter

AMERICAN COLLEGE OF CHEST
 PHYSICIANS

Assembly Room

12:00 noon

PHYSICIANS' ASSOCIATION

State

Department of Public Welfare

Wednesday Morning, May 20, 1959
 Gold Room No. 114

9:00 a.m.

1. "Design for State Hospital Treatment"
 J. W. Klapman, Chicago
 Chicago State Hospital
 2. "Criminality Among Narcotic Addicts"
 (Serving Sentence in the Illinois State Reformatory for Women)
 Mr. Bernard F. Robinson, Dwight Sociologist, State Reformatory for Women
 3. "Psychiatric Treatment of the Geriatric Patient in a State Mental Hospital"
 Kurt Wolff, Galesburg
 Clinical Director, Galesburg State Research Hospital
 4. "Chlorpromazine — Four Years Later"
 Werner Tuteur, Elgin
 Clinical Director, Elgin State Hospital

ILLINOIS

ACADEMY OF GENERAL PRACTICE

Luncheon

Wednesday noon, May 20, 1959
 Old Chicago Room No. 101

11:45 The Illinois Academy of General Practice has made arrangements to have a luncheon meeting again this year during the annual meeting of the Illinois State Medical Society.

All physicians are welcome to attend, and members of the Academy are especially invited to be present.

Officers of the Academy are:

President Robert E. Heerens, Rockford
 President Elect John C. Smith, Cicero
 Vice President Franz S. Steinitz, Chicago
 Treasurer C. G. Sachtleben, Chicago
 Executive Secretary . . . H. Marchmont-Robinson, Chicago

The Academy of General Practice would like to call attention to the fact that for the first time, members of the Academy who attend the scientific programs of the Illinois State Medical Society may receive Category II credit for a maximum of 27 hours.

THE GENERAL ASSEMBLY

Wednesday afternoon, May 20, 1959
 The Ballroom

Presiding Arthur T. Shima
 Assisting William Meszaros
 1:30 The President's Address:

Raleigh C. Oldfield, Oak Park, President, Illinois State Medical Society
 2:00 Annual Address in Medicine: "Sodium, Hypertension and Primary Aldosteronism"

Jerome W. Conn, Ann Arbor, Michigan,
Professor of Medicine, University of
Michigan Medical School

- 2:45 Annual Address in Surgery: "Changing
Concepts in the Use of Antibiotics in
the Treatment of Surgical Infections"
Frank Lamont Meleney, Miami, Flor-
ida, Lecturer in Surgery, University
of Miami School of Medicine; Pro-
fessor Emeritus of Clinical Surgery,
Columbia University, New York

3:30 INTERMISSION TO VIEW EXHIBITS
Presiding Herbert P. Friedman
Assisting Herbert S. Miller
4:00 CLINICAL PATHOLOGICAL CONFER-
ENCE

Internist: Edmund F. Foley, Chicago,
Professor of Medicine, University of
Chicago

Pathologist: James W. Reagan, Clevel-
and, Ohio, Institute of Pathology,
Western Reserve University School
of Medicine

THE ANNUAL DINNER

Wednesday evening, May 20, 1959
The Ballroom
7:00 o'clock

The annual dinner this year will honor Dr.
Raleigh C. Oldfield of Oak Park, the retiring presi-
dent of the Illinois State Medical Society. The
toastmaster will be the immediate past president,
Dr. Lester S. Reavley of Sterling.

Miss Ann Landers of Chicago will be the speak-
er. This will be the first time that a woman has

been asked to speak to our annual dinner.

Dr. Walter Bornemeier is the chairman of the
Annual Dinner Committee; the Woman's Auxil-
iary will assist in the evening activities and the
decorations for the Ballroom.

The President's Certificate will be presented to
Dr. Oldfield by the Chairman of the Council, Dr.
Burtis E. Montgomery of Harrisburg.

Health Progress Awards will also be presented
during the evening.

PROGRAMS FOR THURSDAY, MAY 21, 1959

SECTION ON DERMATOLOGY

Chairman William K. Ford, Rockford
Secretary J. M. McCuskey, Peoria

Thursday morning, May 21, 1959
Old Chicago Room No. 101

- 9:00 "Physiology of the Aging Skin"
Allan L. Lorincz, Chicago, Associate
Professor of Dermatology, University
of Chicago College of Medicine

- 9:30 "Common Skin Diseases of the Aged"
William N. Slinger, Rockford, Assistant
in Dermatology, Northwestern Uni-
versity Medical School, Chicago

- 10:00 "Treatment of the Aged Skin"
Hilliard M. Shair, Quincy, Dermatology
Department, Physicians and Surgeons
Clinic

- 10:30 INTERMISSION TO VIEW EXHIBITS

- 11:00 PANEL: "Neoplasms of the Skin of the
Aged"
Chairman: Marcus R. Caro, Chicago
Harvey Blank, Miami, Florida, Profes-
sor and Chairman, Department of
Dermatology, University of Miami
Cecil A. Krakower, Chicago, Professor
and Head of Department of Pathol-
ogy, University of Illinois College of
Medicine.

Danely P. Slaughter, Chicago, Director
of Tumor Clinic, Research and Edu-
cational Hospital, University of Illi-
nois

Theodore J. Wachowski, Aurora, Radi-
ologist, Copley Memorial Hospital
The panel will present colored lantern
slides to illustrate various benign and
malignant tumors of the skin, and will
discuss the diagnosis and treatment of
each.

- 12:00 LUNCHEON — for members of the sec-
tion and their guests.
Old Chicago Room No. 101

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

Chairman Herbert S. Miller, Winnetka
Secretary Herbert Ratner, Oak Park

Thursday morning, May 21, 1959
The Assembly Room

- 9:00 PANEL AND OPEN DISCUSSION:
"Modern Threats to the Profession of
Medicine"
(Panelists to be announced)

- 11:15 ADJOURNMENT TO VIEW EXHIBITS

12:00 LUNCHEON: Section on Preventive Medicine and Public Health
 Illinois Association of Medical Health Officers
 Illinois Academy of Preventive Medicine
 Illinois Chapter, American Association of Public Health Physicians

Speaker: Walter Whitaker, Quincy
 "Staphylococcus Infections — Prevention and Control"

Adjournment by 1:30 to attend "General Assembly" in the Ballroom

SECTION ON MEDICINE

Chairman Charles F. Downing, Decatur
 Secretary Charles A. Gianasi, Chicago
 Thursday morning, May 21, 1959
 Crystal Room

9:00 "The Significance of Gall bladder Deformities"

Edward M. Cook, Jr., Decatur, Assistant Radiologist, Decatur and Macon County Hospital

9:15 — Discussion

9:20 "The Significance of Pleural Effusion"

Stanford K. Sweany, Chicago, Chief, Pulmonary Disease Section, Veterans Administration Research Hospital

9:35 — Discussion

9:40 "How To Stay Young"

Robert M. Kark, Chicago, Professor of Medicine, University of Illinois College of Medicine

10:00 INTERMISSION TO VIEW EXHIBITS

10:30 PANEL: "The Diagnosis and Treatment of Thyrotoxicosis"

MODERATOR: Samuel P. Asper, Jr., Baltimore, Maryland Associate Dean, Johns Hopkins University School of Medicine

Lindon Seed, Chicago, Associate Professor of Surgery, University of Illinois College of Medicine

George V. LeRoy, Chicago, Associate Dean, University of Chicago School of Medicine

SECTION ON ALLERGY

Chairman Norman Ehrlich, Chicago
 Secretary Robert Becker, Joliet
 Thursday morning, May 21, 1959
 Gold Room No. 114

9:00 PANEL — "Bronchial Asthma, Diagnosis, Differential Diagnosis and Treatment"

MODERATOR — Samuel Bukantz, Denver, Medical and Research Director at Jewish National Home for Asthmatic Children

Discussants: Lawrence Breslow, Chicago, Clinical Assistant Professor of Pediatrics, University of Illinois College of Medicine

George Pollock, Chicago, Associate Professor, Department of Psychiatry, University of Illinois College of Medicine

Ben Z. Rappaport, Chicago, Clinical Professor, Department of Medicine, Head of Allergy Unit, University of Illinois College of Medicine

Gordon Snider, Chicago, Assistant Professor of Medicine, Chicago Medical School; Assistant Director, Chest Department, Michael Reese Hospital.

David W. Talmage, Chicago, Associate Professor of Medicine, University of Chicago, Division of Allergy

10:30 Open discussion and questions

11:00 Business meeting

11:30 ADJOURNMENT FOR VIEWING EXHIBITS

12:30 Luncheon for the Section members and their guests will be held in the Ruby Room No. 113.

PHI CHI LUNCHEON

Thursday noon, May 21, 1959
 Life Room No. 108

12:00 noon

The Phi Chi fraternity will have a luncheon meeting on Thursday noon. Dr. Jacob E. Reisch, Springfield, editor of the Phi Chi Bulletin, will be in charge of plans.

All members of the fraternity are welcome.

Have you read Ann Lander's widely syndicated column? She's the interesting speaker at the Annual Dinner. Don't miss her!

THE GENERAL ASSEMBLY

Thursday afternoon, May 21, 1959
The Ballroom

- Presiding Lawrence Breslow
Assisting Norman Ehrlich
- 1:30 "A Review of the 1958 Poliomyelitis Epidemic in Detroit"
Joseph G. Molner, Detroit, Michigan,
Commissioner of Health
- 1:50 "A Critical Re-evaluation of Nutritional Requirements in Growth and Development"
Charles U. Lowe, Buffalo, New York,
Research Professor of Pediatrics,
University of Buffalo School of Medicine
- 2:10 "Recent Developments in the Etiology of Bronchial Asthma"
Samuel C. Bukantz, Denver, Colorado,
National Home for Asthmatic Children
- 2:30
James W. Reagan, Cleveland, Ohio,
Institute of Pathology, Western Reserve University School of Medicine
- 2:45 "Systemic Therapy of Superficial Fungus Infections"
Harvey Blank, Miami, Florida, Professor and Chairman, Department of Dermatology, University of Miami
- 3:00 INTERMISSION TO VIEW EXHIBITS

Presiding Charles F. Downing
Assisting William K. Ford

3:30 SYMPOSIUM: "Medical Aspects of Geriatrics"

MODERATOR: George V. Byfield, Chicago, Assistant Professor of Medicine, University of Illinois College of Medicine

Samuel P. Asper, Jr., Baltimore, Maryland, Associate Dean, Johns Hopkins University School of Medicine

Claire Ryder, Washington, D.C., United States Public Health Service

Samuel Liebman, Winnetka, Medical Director, North Shore Hospital

Hiram Langston, Chicago, Clinical Associate Professor of Surgery University of Illinois College of Medicine

LOYOLA ALUMNI BANQUET

Thursday evening, May 21, 1959
The Crystal Room

6:30 p.m.

The medical alumni of Stritch School of Medicine, Loyola University are planning a dinner meeting during the annual meeting of the Society.

Special announcements of the classes to be honored, the speaker for the evening, and other arrangements will be published in the May issue of the Journal.

PROGRAMS FOR FRIDAY, MAY 22, 1959

SECTION ON PATHOLOGY

Chairman Herbert P. Friedman, Urbana
Secretary J. Robert Thompson, Chicago
Friday morning, May 22, 1959
Crystal Room

(Joint Meeting with Illinois Society of Pathologists)

9:00 PANEL: "Exfoliative Cytology in Your Practice"

MODERATOR: J. Robert Thompson, Chicago, Director of Laboratory, City of Chicago, Municipal Tuberculosis Sanitarium; Clinical Assistant Professor of Pathology, University of Illinois College of Medicine.

James W. Reagan, Cleveland, Ohio, Institute of Pathology, Western Reserve University.

Elizabeth McGrew, Chicago, Associate Professor of Pathology, University of Illinois College of Medicine

Ronald Greene, Chicago, Associate Professor of Obstetrics and Gynecology, Northwestern University Medical School; Senior Attending Obstetri-

cian and Gynecologist, Wesley Memorial Hospital.

Harold Grimm, St. Charles, Clinical Associate Professor of Pathology, University of Illinois College of Medicine.

Question and Answers

10:30 INTERMISSION TO VIEW EXHIBITS

11:00 "Cellular Diagnosis of Adenocarcinoma of the Female Genital Tract"

James W. Reagan, Cleveland, Ohio, Institute of Pathology, Western Reserve University

12:00 Luncheon and business meeting — Illinois Society of Pathologists.

Old Chicago Room No. 101

AMERICAN COLLEGE OF SURGEONS

Friday Morning, May 22, 1959
Assembly Room

SYMPOSIUM ON TRAUMA

9:00 "Injuries to the Wrist"

Moderator: Fred Shapiro, Chicago

Panelists: Ralph Lidge, Chicago
Robert Mussey, Urbana

- 10:00 "Some Amputation 'Pointers'"
Robert Thompson, Chicago
10:25 — Discussion
- 10:30 INTERMISSION
- 10:45 "The Unconscious Injured Patient"
Oscar Sugar, Chicago
11:15 — Discussion
- 11:20 "Laryngeal Trauma"
Kenneth C. Johnston, Chicago
11:55 — Discussion
- 12:00 — LUNCHEON
Friday afternoon, May 22, 1959
Assembly Room
- 2:00 "Fractures of the Femoral Shaft"
Fred Stuttle, Peoria
2:25 — Discussion
- 2:30 "Management of Hip Fractures"
George Millington, Chicago
2:55 — Discussion
- 3:00 INTERMISSION
- 3:10 "Fractures of the Tibia" (Including Knee
and Ankle Areas)
Moderator:
Vernon Turner, Evanston
Panelists:
Robert Meany, Chicago
Howard Schneider, Chicago
James Kurtz, LaGrange.

ILLINOIS ASSOCIATION OF BLOOD BANKS

Friday Afternoon, May 22, 1959

Crystal Room

Presiding: Francis J. Tenczar, Wesley Memorial
Hospital, Chicago

SYMPOSIUM ON HEMOPHILIA

(In collaboration with the Hemophilia
Foundation), Conducted by Armand
J. Quick, Milwaukee, Wisconsin, Pro-
fessor of Biochemistry, Marquette
University School of Medicine

- 2:00 "The Mechanism of Blood Coagulation"
Basic principles and utilization of labo-
ratory techniques in the clotting
mechanism.

2:40 Question and Answer Period

- 3:00 "Hemophilia: Diagnosis and Hemother-
apy"

Current research and future outlook.

3:30 Question and Answer Period

- 3:45 "The Role of the Blood Bank in Hemo-
therapy of the Hemophiliac"

William S. Kyler, Administrative Di-
rector, Chicago Blood Donor Serv-
ice

- 4:00 Business Meeting — Illinois Association
of Blood Banks.

ANNUAL MEETING COMMITTEES

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F. D. Garcia, Chicago
R. R. Hartman, Jacksonville
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M. J. Parenti, Chicago
E. F. Lutterbeck, Chicago
L. F. Roblee, Lockport
M. J. Shaykin, Chicago
C. O. Smith, Oak Park

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ANNUAL DINNER COMMITTEE

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TECHNICAL EXHIBITORS

Abbott Laboratories, North Chicago, Illinois, Booth 20
Association of American University Presses, Booth 40
Audio Digest Foundation, Glendale, California, Booth 18
Black & Skaggs, Bloomington, Illinois, Booth 24
Blue Shield Plan, Rockford, Illinois, Booth 36
Blue Shield — Illinois Medical Service (see under "I")
Borchardt Company, Chicago, Illinois, Booth 78
George A. Breon & Company, New York, Booths 38 & 39
Brooks Appliance Company, Chicago, Illinois, Booth 10
Chicago Pharmacal Company, Chicago, Illinois, Booth 65
Ciba Pharmaceutical Products, Inc., Summit, New Jersey, Booth 25
The Coca Cola Company, Atlanta, Georgia, Booth 14
Daniels Surgical & Medical Supplies, Chicago, Illinois, Booths 15, 16, 17
Desitin Chemical Company, Providence, Rhode Island, Booth 6
Doho Chemical Corporation, New York, Booth 33
Eaton Laboratories, Norwich, New York, Booth 3
Eisele & Company, Nashville, Tennessee, Booth 8
Eli Lilly & Company, Indianapolis, Indiana, Booth 2
Encyclopaedia Britannica, Inc., Chicago, Illinois, Booth 47
E. Fougera & Company, Inc., Hicksville, New York, Booth 30
Geigy Pharmaceuticals, Yonkers, New York, Booth 74
Great Books of the Western World, Grand Rapids, Michigan, Booth 77
Health Insurance Council, Chicago, Illinois, Booth 31
Illinois Medical Service, (Blue Shield) Chicago, Illinois, Booth 58
Lederle Laboratories, American Cyanamid Company, Pearl River, New York, Booth 13
J. B. Lippincott Company, Philadelphia, Pennsylvania, Booth 59
Loma Linda Food Company, Arlington, California, Booth 9
P. Lorillard Company, New York, Booth 5
Marshall Erdman & Associates, Madison, Wisconsin, Booths 61 and 62
Massachusetts Indemnity & Life Insurance Co., Boston, Massachusetts, Booth 57
S. E. Massengill Company, Kansas City, Missouri, Booth 27
Medco Products, Tulsa, Oklahoma, Booth 26
Medical Aids, Inc., Park Ridge, Illinois, Booth 72
Medical Protective Company, Fort Wayne, Indiana, Booth 73
Medico-Medical International Corporation, Booth 37
Merck, Sharp & Dohme, Philadelphia, Pennsylvania, Booth 67
C. V. Mosby Company, St. Louis, Missouri, Booth 63
V. Mueller & Company, Chicago, Illinois, Booth 68
Hermien Nusbaum & Associates, Chicago, Illinois, Booth 60
OMS Surgical Supply Company, Chicago, Illinois, Booth 45
Parke, Davis & Company, Detroit, Michigan, Booth 71
Parker, Aleshire & Company, Chicago, Illinois, Booth 12
Pfizer Laboratories, Brooklyn, New York, Booth 21
The Purdue Frederick Company, New York, Booth 79
Rasman Pharmacal Company, Oak Park, Illinois, Booth 34

R. J. Reynolds Tobacco Company, Winston-Salem, North Carolina, Booth 46
 A. H. Robins Company, Inc., Richmond, Virginia, Booth 66
 Roche Laboratories, Nutley, New Jersey, Booth 11
 J. B. Roerig & Company, New York, Booth 7
 Sanborn Company, Waltham, Massachusetts, Booth 64
 W. B. Saunders Company, Philadelphia, Pennsylvania, Booth 69
 Julius Schmid, Inc., New York, Booth 56
 G. D. Searle & Company, Chicago, Illinois, Booth 70
 7-Up Developers' Association, Chicago, Booth 1
 Smith Kline & French Laboratories, Philadelphia, Pennsylvania, Booth 19

E. R. Squibb & Sons, New York, Booth 76
 Standard Process Laboratories, Milwaukee, Wisconsin, Booth 22
 Strassenburgh Laboratories, Rochester, New York, Booth 23
 Thermo-Fax Sales Corporation, Chicago, Illinois, Booths 28-29
 United States Tobacco Company, New York, Booth 35
 University of Chicago Press, Chicago, Illinois, Booth 40
 The Upjohn Company, Kalamazoo, Michigan, Booth 75
 Westwood Pharmaceuticals, Buffalo, New York, Booth 32
 Winthrop Laboratories, New York, Booth 4

DESCRIPTIONS OF TECHNICAL EXHIBITS

ABBOTT LABORATORIES

Booth 20

The exhibit will feature the Abbott Laboratories Antibiotic Triad — three products which together provide control of all coccal infections: Erythrocin Stearate, Compcicillin -VK and Spontin. Also shown will be Abbott's unique new "metered release dose form" products, Tral Gradumets and Desoxyn Gradumets, plus a selection of other Abbott specialties.

ASSOCIATION OF AMERICAN UNIVERSITY PRESSES

Booth 40

The Association of American University Presses invites you to visit their exhibit of new and standard titles in the field of medicine. Also on display will be books of general interest representing the wide variety of publications of the many university presses.

AUDIO DIGEST FOUNDATION

Booth 18

Audio-Digest Foundation — a subsidiary of the California Medical Association — gives the busy physician an effortless tour through the best of current medical literature each week. This medical tape-recorded "newscast" — compiled and reviewed by a professional Board of Editors — may be heard in the physician's automobile, home or office. The Foundation also offers medical lectures by nationally recognized authorities.

BLACK AND SKAGGS ASSOCIATES

Booth 24

The trade-mark PM identifies the leaders in the field of PROFESSIONAL MANAGEMENT for more than 25 years, and they cordially invite you to Booth #24, where experienced executives will be glad to discuss your personal and professional BUSINESS PROBLEMS, confidentially and without obligation.

Elbert Cooper and Roger Peterson of the PM — BLOOMINGTON office will welcome personally the internes, residents, physicians and their wives who are

in attendance at the Illinois State Medical Convention.

BLUE SHIELD PLAN OF MEDICAL-SURGICAL SERVICE OF ILLINOIS

Booth 36

Doctor, be sure to stop and pick up your Blue Boutonniere from Blue Shield each day.

BORCHERDT COMPANY

Booth 78

Two time-tested products are being shown at this meeting.

MALT SOUP EXTRACT for constipation and intractable pruritus ani. This dietary product acts on the intestinal flora to produce a predominantly aciduric flora.

UROLITIA is a mild soothing urinary antiseptic for geriatric patients.

Register for samples and information on these products.

GEORGE A BREON & COMPANY

Booths 38 & 39

BROOKS APPLIANCE COMPANY

Booth 10

CHICAGO PHARMACAL COMPANY

Booth 65

The following Chimedic products will be featured: Urised — for sedation and antisepsis in genitourinary infections; Estrosed — combining the most potent oral estrogen, ethinyl estradiol, and the safest tranquilizer, Reserpine, for the menopausal syndrome; and Juniplex, — delicious tonic for all ages containing essential minerals plus the entire B complex including B12; plus a complete line of injectables, ointments, liquids, and tablets.

CIBA PHARMACEUTICAL PRODUCTS, Inc.

Booth 25

Esidrix is hydrochlorothiazide, an improved analog of

chlorothiazide. Milligram-for-milligram, it is the most effective oral diuretic-anti-hypertensive known. Therapeutically, Esidrix is 10 to 15 times more potent than chlorothiazide. Weight losses up to 56 pounds have been reported. In many cases Esidrix caused copious diuresis in patients unresponsive to other oral and/or parenteral diuretics. Side effects are usually mild, infrequent, and readily controlled.

THE COCA-COLA COMPANY

Booth 14

Ice-cold Coca-Cola served through the courtesy and co-operation of the Coca-Cola Bottling Co., of Chicago, Inc., Chicago, Illinois and The Coca-Cola Company.

DANIELS SURGICAL & MEDICAL SUPPLIES

Booths 15, 16 and 17

Daniels with Mid America's most ultra modern facilities to serve your modern professional needs, will again be located at the north end of the exhibition hall where the newest in "Top Line Brand" equipment will be featured. Ritter's "Time Saving & Energy Saving" electrically operated examining tables, Burdick's new portable continuous or pulsed ultra sound and muscle stimulator. Burdick's new portable EK-111 dual speed electrocardiograph. Liebel-Flarsheim's basal metabolism apparatus and diathermy — and many other outstanding nationally advertised lines of fine equipment for your office.

DESITIN CHEMICAL COMPANY

Booth 6

DESITIN OINTMENT: Pioneer CLO ointment for treatment of: burns, ulcers, diaper rash, abrasions, etc.
DESITIN POWDER: Saturated with CLO, Dainty, relieves chafing, sunburn, diaper rash, etc.

DESITIN HEMORRHOIDAL SUPPOSITORIES, AND RECTAL OINTMENT: Relieves pain and itching, promote healing, give comfort in uncomplicated hemorrhoids, fissures. No anesthetics or styptics.

DESITIN BABY LOTION: Protective, antiseptic, emollient, contains no mineral oil, cleanses baby skin with tender care.

DESITIN ACNE CREAM: A non-staining, flesh-tinted "Medicream" for the treatment of Acne Vulgaris, skin blemishes, effective in removal of skin oiliness. Antiseptic.

DESITIN COSMETIC AND NURSERY SOAP: Super-mild, pleasantly scented, antiseptic and deodorant.

DOHO CHEMICAL CORPORATION

Booth 33

DOHO CHEMICAL CORPORATION is pleased to exhibit:

AURALGAN: Otitis media and removal of Cerumen.

OTOSMOSAN: Fungicidal and bactericidal in the suppurative and aural dermatomycotic ears.

RHINALGAN: Nasal decongestant free from systemic or circulatory effect.

LARYLGAN: Throat spray and gargle for infectious and non-infectious sore throat involvements.

Mallon Chemical Corporation, Division of DOHO:
RECTALGAN: For relief of pain and discomfort in hemorrhoids, pruritus and perineal suturing.

DERMOPLAST: An Aerosol spray for surface pain, burns, and abrasions; Obs. & Gyn. use.

EATON LABORATORIES

Booth 3

Furadantin® a specific for urinary tract infections, provides rapid bactericidal action against a wide range of gram-positive and gram-negative bacteria and organisms resistant to other agents. In six years of extensive

use in the treatment of genitourinary tract infections, development of bacterial resistance remains negligible with Furadantin.

New Furacin® Cream now available to control infection and facilitate tissue repair of the vagina, cervix, anorectal area, and elsewhere when a cream base of fine consistency is preferred. It is water-miscible, self-emulsifying in body fluids, esthetically acceptable and ideal for hospital use.

EISELE & COMPANY

Booth 8

Eisele & Co. will display their line of hypodermic syringes, both the regular and interchangeable, hypodermic needles, clinical thermometers, Eco Bandage and specialty glassware.

ELI LILLY AND COMPANY

Booth 2

You are cordially invited to visit the Lilly exhibit located in space number 2. The Lilly sales people in attendance welcome your questions about Lilly products and recent therapeutic developments.

ENCYCLOPAEDIA BRITANNICA, INC.

Booth 47

A great new edition of the Encyclopaedia Britannica and its correlated fact finding research services will be on display at this meeting. To those who may be interested in acquiring Britannica, there is available a special discount.

Whether your interest is current or for the future, please visit our booth. You need not invest to investigate.

MARSHALL ERDMAN AND ASSOCIATES

Booths 61 and 62

Erdman Prefabricated Medical Buildings are the result of years of experience in the field of design, manufacturing and construction. No other company has had such large experience in this field. About 200 doctors are now practicing in Erdman built medical buildings. Experienced architects, engineers and construction superintendents of the Erdman Company will design, manufacture and build your medical building from the land-planning stage until you open the door into your own office.

Contact Marshall Erdman and Associates, Inc., Madison, Wisconsin before you build.

E. FOUGERA AND COMPANY

Booth 30

You are invited to visit the Fougera exhibit and discuss our products with medical service representatives. For your convenience, all literature and sample supplies will be sent to your office.

GEIGY PHARMACEUTICALS

Booth 74

GEIGY PHARMACEUTICALS extends a cordial invitation to members of the Association to visit their exhibit. Reports of the most recent clinical research studies regarding BUTAZOLIDIN, PRELUDIN, STEROSAN WITH HYDRO-CORTISONE AND DULCOLAX will be presented by the staff in attendance.

GREAT BOOKS OF THE WESTERN WORLD

Booth 77

The Great Ideas Program featuring the master-key to the Great Books... the SYNTOPICON

The Great Ideas Program, a new advancement in liberal education, is built around the revolutionary Syn-

topican. This master-key "Idea Indexes" all the Great Books, making it possible to find what the great writers and thinkers said about *any* ideas in minutes. The Program will help business and professional people, students, graduates — or anyone interested in exploring the fascinating world of great ideas

HEALTH INSURANCE COUNCIL

Booth 31

The Health Insurance Council is a federation of eight insurance associations embracing member companies that provide 90 per cent of the accident and health policies written by the insurance business. The Council serves as an industry spokesman by representing its views and implementing its efforts in strengthening relations in the lines of communication with the providers of medical care.

ILLINOIS MEDICAL SERVICE

Booth 58

Hospitality booth — all physicians are welcome.

LEDERLE LABORATORIES AMERICAN CYANAMID COMPANY

Booth 13

You are cordially invited to visit the Lederle booth where our medical representatives will be in attendance to provide the latest information and literature available on our line. Featured will be Achromycin V., Aristocort, Varidase Buccal and Pathibamate.

J. B. LIPPINCOTT COMPANY

Booth 59

J. B. Lippincott Company presents, for your approval, a display of professional books and journals geared to the latest and most important trends in current medicine and surgery. These publications, written and edited by men active in clinical fields and teaching, are a continuation of more than 100 years of traditionally significant publishing.

LOMA LINDA FOOD COMPANY

Booth 9

With the background of years of experience in perfecting a hypoallergenic milk powder, and also a newly developed concentrated liquid milk the protein of which is fully derived from the soybean and formulated with other essential additives to care for the needs of babies, growing children, and adults, the Loma Linda Food Company will be happy to welcome you to its exhibit. Attendants will be pleased to discuss the values of Soy-lac powder and concentrated liquid. Samples of this flavorful product will be served at the exhibit.

P. LORILLARD COMPANY

Booth 5

P. Lorillard Company invites you to visit the Kent Cigarette Exhibit. We are presenting the Story of Kent Cigarettes and their unique filter which is more efficient than any other now on the market according to several independent research groups.

A table cigarette box with your signature in gold will be a pleasant souvenir of your visit to the convention.

MASSACHUSETTS INDEMNITY AND LIFE INSURANCE COMPANY

Booth 57

The Massachusetts Indemnity and Life Insurance Company has for many years specialized in high grade dis-

ability income protection designed to insure the professional man's greatest asset — his earning power. Our policies are non-cancellable and guaranteed renewable to age 65 (women to age 60). At the convention we will have available at our booth excellent material and qualified personnel, to explain the guaranteed features of our non-cancellable contracts.

S. E. MASSENGILL COMPANY

Booth 27

Best wishes from Massengill for a most successful and informative meeting! Massengill representatives will be pleased to discuss with you any Massengill products in which you are interested. Products being featured are: Adrenosem, the systemic hemostat — Homagenets, the only solid homogenized vitamins — Obedrin, superior weight reducing aid — The Salcort Family, a complete range in arthritic therapy — Massengill Powder, the acid douche.

MEDCO PRODUCTS

Booth 26

Presenting the MEDCO-SONLATOR. Providing a new concept in therapy by combining muscle stimulation and ultrasound simultaneously through a SINGLE Three-Way Sound Applicator.

The MEDCO-SONLATOR is a distinct advance in the effectiveness of physical therapy in your office or hospital. A few minutes spent in our booth would prove of value to your practice.

MEDICAL AIDS, INC.

Booth 72

Medical Aids, Incorporated, will feature a complete line of pressure bandages, including the well-known Dalzoflex and Primer Combination, recommended in the treatment of leg ulcers, phlebitis, etc.; the Nulast Elastic Crepe bandage, constructed of Viscolax rubber threads, Dalmas elastic strapping, Dalmoplast Plastic Adhesive, Dalzo Zinc Oxide Tape and Gold Strike Splints.

MEDICAL PROTECTIVE COMPANY

Booth 73

The Medical Protective Company, originator of professional protection exclusively, now in its sixtieth year, provides unexcelled coverage in ANY claim or suit for damages based on professional services rendered or which should have been rendered, plus unparalleled experience from the successful handling of some 78,000 claims and suits in the professional liability field. In prevention, defense and protection against loss there is no substitute for specialized service.

MEDICO-MEDICAL INTERNATIONAL COOPERATION

Booth #37

This exhibit will tell of the need for medical care that exists throughout most of the world; how much good can be accomplished toward meeting these needs with a relatively small effort since a little medicine goes a long way in most underdeveloped parts of the globe, and what MEDICO is doing to meet these needs.

This exhibit will also encompass the fact that there is an incalculable dividend in the good will that this program of person-to-person medicine engenders.

MERCK SHARP & DOHME

Booth 67

A new and very promising adrenocortical steroid is featured at the Merck Sharp & Dohme booth. 'DECA-

DRON' dexamethasone possesses all the basic actions and effects of other gluco-corticoids but in different degree. Its anti-inflammatory activity is more potent on a weight basis than any other known gluco-corticoid.

'DIURIL' — a diuretic compound that possesses favorable biologic properties common to both the mercurial preparations and the carbonic anhydrase inhibitors is also of interest. 'DURIL' acts essentially without toxic effects or other disadvantages.

Technically trained personnel will be present to discuss these and other subjects of clinical interest.

THE C. V. MOSBY COMPANY

Booth 63

The familiar CVM mark on every book you'll see on display in our booth is your assurance that it meets the high standards of quality and craftsmanship which have been a hallmark of Mosby products for more than half a century. The vision to anticipate the need — the wisdom to plan new books — the skilled teamwork to produce a quality product — all have been integrated into the many fine professional books and journals on display for your perusal. Make it a point to visit our booth. You'll be welcome as one of our guests. We'd particularly like for you to leisurely examine some of our new 1959 titles, as well as current issues of our journals. If you'd like his assistance, an experienced representative will be happy to discuss any book with you.

V. MUELLER & COMPANY

Booth 68

The V. Mueller & Company exhibit will feature, principally, an interesting selection of fine surgical instruments — both standard and special — of particular importance to the general surgeon. A number of new items and specialties will be included in the display, which is always a worthwhile attraction.

HERMIEN NUSBAUM AND ASSOCIATES

Booth 60

Booth 60 showing items of interest to all doctors for their own family use as well as for every type of patient.

EVENFLO infant feeding equipment; Premature nipples; Superplastic boilable bottles; Drinkup a transition bottle top for children as well as postoperative pediatric cases, excellent also for geriatric feeding.

MAROC POWDER AND OINTMENT: Ideal for prevention and cure of diaper rash, bedsores, etc.

MODELLA revolutionary products promote good sleeping; Sleepy Drye waterproof panties together with Mitey Drye liner prevent diaper rash. TFL flexible, disposable CLINIC DROPPER.

OMS SURGICAL SUPPLY COMPANY

Booth 45

PARKE, DAVIS & COMPANY

Booth 71

Members of our medical service staff will be in attendance at our exhibit to discuss important Parke-Davis specialties which will be on display.

PARKER, ALESHIRE & COMPANY

Booth 12

Administrators of the Special Disability and Major hospital plans for members of the Illinois State Medical Society.

Over \$860,000.00 has been paid in claim benefits under the disability plan to insured members since the inception date, April 1, 1947.

You are cordially invited to visit our booth and ask

our representatives for information about the accident and sickness plan and the new major hospital plan.

Your membership entitles you to apply for both outstanding plans.

PFIZER LABORATORIES

Booth 21

Visit the Pfizer display which features Cosa-Tetrastatin, Cosa-Terramycin and Cosa-Signemycin, Pfizer's glucosamine potentiated antibiotics. The Pfizer representative will be pleased to provide you with information on Diabinese — a new oral hypoglycemic agent, Vistaril which is classified by the Council on Drugs of the American Medical Association as a psychotherapeutic Antihistamine, and Daricon — a new anticholinergic compound possessing a high order of therapeutic effectiveness and prolonged duration of action.

THE PURDUE FREDERICK COMPANY

Booth 79

The Purdue Frederick Company will present:

Cerumenex: Cerumenolytic for the quick removal of excessive cerumen. Contains Cerapon, a new surfactant, with propylene glycol and chlorbutanol.

Senokot: Neuropertaltic constipation corrective containing the total senna glycosides.

Senokap: Stool softener, combining the action of dioctyl sodium sulfosuccinate with that of Senokot.

Senokot with Psyllium: Combines the bulk effect of psyllium with Senokot.

Senobile: Combines the bile salt effect with Senokot.

ProBilagol: Cholecystokinetic containing d-glucitol and homatropine methylbromide. For biliary disease therapy.

O. RASMAN PHARMACAL COMPANY, INC.

Booth 34

Rasman Pharmacal Company invites you to view its exhibit which will feature several pre-natal tablets, a one a day maintenance vitamin, high potency children's vitamin, appetite depressants and many other items of interest to the physician. Literature and samples will be available. Stop by our booth as we also have a nice gift for you.

R. J. REYNOLDS TOBACCO COMPANY

Booth 46

Welcome to the R. J. Reynolds Tobacco Company exhibit: You are cordially invited to receive a cigarette case (monogrammed with your initials) containing your choice of CAMEL, WINSTON Filter, Menthol Fresh SALEM, or CAVALIER King Size Cigarettes.

A. H. ROBINS COMPANY, INC.

Booth 66

Physicians attending the meeting of the Illinois State Medical Society are extended a cordial invitation to visit the exhibit of the products of the A. H. Robins Company. Experienced medical representatives will be in attendance to welcome you and answer inquiries relative to any of Robins prescription specialties.

ROCHE LABORATORIES

Booth 11

MADRIBON, a completely new, low-dosage antibacterial distinguished by particular therapeutic effectiveness in upper respiratory infections. Findings in approximately 5000 clinical subjects demonstrate that low doses of MADRIBON, administered at 24-hour intervals, provide good to excellent results in over 85% of the pa-

tients. MADRIBON is characterized by a high degree of safety plus a notable absence of skin rashes.

J. B. ROERIG & COMPANY

Booth 7

J. B. Roerig and Company will welcome members of the medical profession at the company's exhibit of leading specialties and new products. Representatives will be in attendance to answer any questions you may have. Roerig recently introduced a number of new products which representatives at the exhibit will describe and give information on the results of clinical reports.

SANBORN COMPANY

Booth 64

New ELECTROCARDIOGRAPHS of advanced design and function, as well as latest models of other instruments for diagnostic use, will be displayed and demonstrated at the Sanborn Company Booth 64.

Demonstrations and/or data will also be available on Sanborn instruments for biophysical research — single and multi-channel recording systems, monitoring oscilloscopes and physiological transducers.

Qualified Sanborn representatives will be pleased to answer questions and assist you with technical problems.

W. B. SAUNDERS COMPANY

Booth 69

Larry Parker will again be on hand at the Saunders booth to display our complete line. New titles of particular interest to practicing physicians will be: Cecil-Loeb: Textbook of Medicine; McLaughlin: Trauma; Current Therapy 1959; DePalma: Management of Fractures and Dislocations; and de Takats: Vascular Surgery.

JULIUS SCHMID, INC.

Booth 56

An interesting and informative exhibit featuring IM-MOLIN Cream-Jel for use without a diaphragm; RAMSES Flexible Cushioned Diaphragm; RAMSES Vaginal Jelly; VAGISEC Jelly and Liquid for vaginal trichomoniasis therapy; and XXXX (Fourex) Skin Condoms, RAMSES and SHEIK Rubber Condoms for the control of trichomonal re-infection.

G. D. SEARLE & COMPANY

Booth 70

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle products of research.

Featured will be Dartal, the new tranquilizing agent which controls activities associated with anxiety states and other neuroses; Enovid, the new synthetic steroid for treatment of various menstrual disorders; Zanchol, a new biliary abstergent; Nilevar, the new anabolic agent, and Rolicton, a new safe, non-mercurial oral diuretic.

Also featured, will be Vallestiril, the new synthetic estrogen with extremely low incidence of side reactions; Pro-Banthine and Pro-Banthine with Dartal, the standards in anti-cholinergic therapy; and Dramamine and Dramamine-D, for the prevention and treatment of motion sickness and other nauseas.

7-UP DEVELOPERS' ASSOCIATION

Booth 1

The organizations that bottle and deliver sparkling,

crystal-clear 7-Up to the people of Illinois will be represented at Booth #1. They will be ready at all times to provide the fresh, clean taste of chilled 7-Up for thirsty conventioners.

SMITH KLINE & FRENCH LABORATORIES

Booth 19

E. R. SQUIBB & SONS

Booth 76

E. R. Squibb & Sons has long been a leader in development of new therapeutic agents for prevention and treatment of disease. The results of our diligent research are available to the medical profession in new products or improvements in products already marketed.

At booth 76 we are pleased to present up-to-date information on these advances for your consideration.

STANDARD PROCESS LABORATORIES

Booth 22

(Subsidiary of Vitamin Products Company)

Introducing and featuring the first revolutionary specific ulcer medication to contain true cell proliferants, Anti-Gastrin. Anti-Gastrin contains colloidal isotopic silicon, colloidal trace mineral silicates, allantoin and chlorophyll. Contains no alkalis or antispasmodics — Non-constipating and non-toxic — No contraindications — Does not inhibit the normal physiology of nutrition and digestion — Clinically proved effective in 85% of refractory peptic ulcers — Provided a 4 year cure on 14 out of 17 cases of chronic mucous and ulcerative colitis.

STRASENBURGH LABORATORIES

Booth 23

You can get the details as to how Strassenburgh's unique and completely original ionic release principle ('Strasonic' Release) makes possible —

Cough suppression for 8 — 12 hours

with a single dose of 'Tussionex'

Appetite suppression for 10 — 12 hours

with a single dose of 'Biphetamine'

Visit Booth No. 23. You are cordially invited.

THERMO-FAX SALES CORPORATION

Booths 28 and 29

The Thermo-Fax Sales Corporation will display the latest developments from Minnesota Mining and Manufacturing Company, designed to simplify sending statements and save time and money in your office. We cordially invite you to stop at our booth and see a four-second demonstration of the new, all-electric copying machine.

THE UNIVERSITY OF CHICAGO PRESS

Booth 40

See Association of University Presses

UNITED STATES TOBACCO COMPANY

Booth 35

The United States Tobacco Company will display its famous line of SANO tobacco products: Sano Cigarettes — both regular and king size filter tip, Sano All-Havana Cigars and Sano Pipe Tobacco . . . all with less than 1% nicotine by weight. Sano meets the nicotine problem in the only effective way, by removing the nicotine from the

These technical exhibitors will welcome your visit during the Annual Meeting. As always, they will bring valuable contributions to the advancement of our professions. You will profit by meeting them.

tobacco itself before Sano tobacco products are made. Sano cigarettes, cigars and pipe tobacco for good sense and good taste.

THE UPJOHN COMPANY

Booth 75

Professional representatives of The Upjohn Company are eager to contribute to the success of your meeting. We are here to discuss with you products of Upjohn research that are designed to assist you in the practice of your profession. We solicit your inquiries and comments.

WESTWOOD PHARMACEUTICALS

Booth 32

Westwood invites physicians to stop by its booth to discuss their unique dermatological products:

Fostex Cream
Fostex Cake
Sebulex
Lowila Cake
Lowila Emollient

These products are particularly suitable for personal use by physicians and their families, who may be plagued with dandruff, acne, dry itchy skin and sensitivities to soap. Register, so that we may send prescription units to your home.

WINTHROP LABORATORIES

Trancopal, a new major chemical contribution to therapeutics, a nonhypnotic, relaxant and tranquilizer which combines high clinical effectiveness with low toxicity ("as safe as aspirin"), 100 mg. Caplets (average dose 1 Caplet t. i. d.).

The 1959 WOMAN'S AUXILIARY PROGRAM

Registration

Lobby Floor	Sherman Hotel
Tuesday May 19, 1959	7:30 a.m. to 4:00 p.m.
Wednesday May 20, 1959	7:30 a.m. to 4:00 p.m.

PRE-CONVENTION SCHEDULE

Tuesday May 19, 1959
Pre-Convention Board Meeting
Gold Room No. 114 8:30 a.m.

CONVENTION PROGRAM

Tuesday May 19, 1959
George Bernard Shaw Room
Formal opening of the 31st Annual Meeting
10:00 a.m.

Mrs. Fred Endres,
President, Presiding

Invocation The Rev. Richard M. George,
Rector, St. Richard's Episcopal Church, Edgebrook
Pledge to the Flag Mrs. E. M. Egan
Publications Chairman, Woman's Auxiliary to the
American Medical Association
Pledge of Loyalty Mrs. James P. Simonds
Woman's Auxiliary to the American Medical Association
Welcome Mrs. John Malcom Tindal
President of the Woman's Auxiliary to the
Chicago Medical Society
Response Mrs. M. Thomas Gorsuch
President of the Woman's Auxiliary to the
Peoria County Medical Society
Report of Credentials and Registration Committee
..... Mrs. John Koenig, Chairman
Reading of the Convention Rules of Order
..... Mrs. Percy M. Clark, Parliamentarian
Adoption of Convention Program
Announcement of Reference Committee Appointments
Appointment of Committee on Courtesy and Resolutions
Appointment of Election Committee
Appointment of Reading Committee
Greeting from the Illinois State Medical Society
Walter C. Bornemeier, M. D.
Chairman of the Advisory Committee
Convention Announcements
.... Mrs. Richard E. Westland, Convention Chairman
Report of the Revision Committee
..... Mrs. Robert Dunlevy, Chairman
Adjournment

LUNCHEON

Louis XVI Room 12:30 p.m.

Mrs. Fred Endres, Presiding

Program Mrs. Norma Eaton
"Let's Stop and Think"

Hostess Branch Adams County
..... Mrs. Carl Hagler, Chairman

DELEGATES RECONVENE

Report of County Presidents George Bernard Shaw Room
Councilors will introduce the Presidents of their District.
Members of the Auxiliary are invited to attend the Public Relations Dinner at 6:30 p.m.

SECOND SESSION-DELEGATES

Wednesday May 20, 1959

CONTINENTAL BREAKFAST

George Bernard Shaw Room 8:00 a.m. to 9:00 a.m.
honoring
County Presidents
of the
Woman's Auxiliary
to the
Illinois State Medical Society
Mrs. Frederick J. Roos Chairman

ROUND TABLES — 9:15 to 10:00 a.m.

1. Presidents and Presidents-Elect
Mrs. John Van Prohaska Chairman
Mrs. Charles Wunsch
Jade Room No. 103
2. Publications
Mrs. Allen S. Watson Chairman
Today's Health, Bulletin, and History of Medicine
Life Room No. 108
3. Legislation
Mrs. Charles W. Stigman Chairman
Time Room No. 110
4. Projects
Mrs. Eugene T. McEnery Chairman
A.M.E.F., Benevolence, Mental Health, and Recruitment
Gold Room No. 111
10:15 a.m.

SECOND DELEGATE SESSION

George Bernard Shaw Room
Mrs. Fred Endres, President, Presiding
PRESIDENTS' REPORTS

Speaker 11:30 a.m.
Mr. Frank Burrows, Jr.
Field Service Director

Citizen's Traffic Safety Board of Chicago
 Introduction of Speaker
 Mrs. W. W. Davidson, Safety Chairman
MEMORIAL SERVICE 12:15 p.m.
 Conducted by Mrs. Matthew E. Uznanski
 Wednesday Evening

THE ANNUAL DINNER

GRAND BALLROOM

SHERMAN HOTEL

Hospitality Hour 6:30 p.m.
 Dinner 7:30 p.m.

in honor of

Raleigh C. Oldfield, M.D.

and the Past Presidents of the Illinois State Medical Society.

Members of the Woman's Auxiliary to the Illinois State Medical Society are cordially invited to be present for the Annual Dinner.

Committee

Mrs. Richard E. Westland Mrs. Joseph S. Lundholm
 Mrs. Frederick Roos Mrs. Robert E. Dunlevy

and

All County Presidents

Mrs. Harold Dubner

Chairman, Ticket Sales

Tickets to the Annual Dinner will be sold at the registration desk of the Woman's Auxiliary to the Illinois State Medical Society.

THIRD DELEGATE SESSION

George Bernard Shaw Room

May 21, 1959 9:00 a.m.

Mrs. Fred Endres, President, Presiding

Report of Courtesy & Resolutions Committees

..... Mrs. Edward G. Warnick

Final Report of Credentials and Registration Committee

..... Mrs. John Koenig

Reference Committee Reports:

Mrs. Nicholas Chester, Chairman

Report of Officers & Directors

..... Mrs. Henry Christiansen

Report of Standing Committees

..... Mrs. Albert T. Kvedar

Presentation of the Budget for 1959-60

..... Mrs. S. M. Hubbard

Report of the Nominating Committee

..... Mrs. Nicholas G. Chester

Election of Officers

Election of Delegates to the Woman's Auxiliary to the American Medical Association.

New Business

Convention Announcements

INSTALLATION LUNCHEON

HOTEL SHERMAN

Bal Tabarin 1:00 p.m.

Honoring

Mrs. Fred C. Endres Retiring President

Mrs. John Van Prohaska Incoming President

and Past Presidents of the Woman's Auxiliary to the Illinois State Medical Society.

Installation of Officers Mrs. Henry L. Schmitz

Hostess Branch — Peoria County

Mrs. Ward Eastman Chairman

Dramatic Program Mrs. Frances Nash Donovan

Post convention

Board Meeting Room No. 107, Hotel Sherman 3:00 p.m.

Mrs. John Van Prohaska, Presiding

CONVENTION COMMITTEES

CONVENTION CHAIRMAN

..... Mrs. Richard E. Westland

HONORARY CHAIRMAN

Mrs. Raleigh C. Oldfield
 Mrs. Walter C. Bornemeier
 Mrs. C. Elliot Bell

Mrs. G. Henry Mundt
 Mrs. Ralph N. Redmond
 Mrs. Joseph T. O'Neill

PRESS AND PUBLICITY

Chairman Mrs. S. G. Plice
 Co-Chairman Mrs. Joseph Shanks

REGISTRATION AND CREDENTIALS

Chairman Mrs. John W. Koenig
 Co-Chairman Mrs. Edward G. Warnick
 Mrs. J. J. Burke Mrs. George F. Lull
 Mrs. Paul Carstens Mrs. Harl W. Matheson
 Mrs. M. W. Chudwin Mrs. Michael G. Maitino
 Mrs. Henry Christiansen Mrs. Alfred Pagano
 Mrs. V. E. Englemann Mrs. Joseph M. Ruda
 Mrs. Murray Fuchsmann Mrs. Kenneth Stegman
 Mrs. B. M. Johnson Mrs. Roy T. Sugars
 Mrs. J. J. Klabacha Mrs. S. D. Swionkowski
 Mrs. Samuel K. Lewis Mrs. Khan Zia

MEMORIAL SERVICE

Chairman Mrs. Matthew E. Uznanski

HOSPITALITY

Chairman Mrs. Frederick J. Roos
 Co-Chairmen Mrs. Robert E. Dunlevy
 Mrs. Joseph L. Lundholm

Mrs. Kenneth Keeton
 Mrs. Howard D. Stuckey
 Mrs. E. F. Dettmann
 Mrs. R. J. Simonetta
 Mrs. Thomas W. Kelso, Jr.
 Mrs. Paul Hagen
 Mrs. John F. Hubbard
 Mrs. Sherman C. Arnold
 Mrs. D. J. Ladd
 Mrs. I. Erlin Bartlett
 Mrs. Paul Fleener
 Mrs. P. C. Rumore
 Mrs. Paul Schmidt
 Mrs. Benjamin Komasa
 Mrs. William G. Gillies
 Mrs. Robert B. White
 Mrs. H. P. Swartz
 Mrs. Milo Reed
 Mrs. Robert Robbins
 Mrs. Paul Ross
 Mrs. Louis Levin
 Mrs. Charles R. Bardwell
 Mrs. Raymond E. Baxter
 Mrs. F. R. Martin
 Mrs. LeRoy Rubright
 Mrs. Noland W. White
 Mrs. Wilbur A. Miller
 Mrs. M. Thomas Gorsuch
 Mrs. W. J. Mencarow
 Mrs. William E. Knaus
 Mrs. J. D. Belleville
 Mrs. Frank P. Skaggs
 Mrs. John Holman
 Mrs. Samuel H. Bess
 Mrs. Adam Slaw
 Mrs. John Curtis
 Mrs. John L. Hoyt
 Mrs. W. L. Stitzel
 Mrs. Ernest J. Kreutzer
 Mrs. John F. McKeage

FAVORS

Chairman Mrs. Leonard J. Houda

HOUSE

Chairmen Mrs. Sherman C. Arnold
 Mrs. Joseph Cari

PAGES

Chairman Mrs. Michael G. Maitino
 Mrs. Leonard Brodt Mrs. Nicholas Mennite
 Mrs. Joseph P. Cangelosi Mrs. Albert L. Sheetz
 Mrs. Ephraim A. Grier Mrs. Mitchell A. Spellberg
 Mrs. Samuel Heller Mrs. Fred A. Tworoger
 Mrs. Paul Hletko Mrs. Edward A. Zencka
 Mrs. Frank P. Kraft Mrs. Fernly C. Johnson
 Mrs. Milton E. Kurth
 Mrs. Paul McDaniel

INFORMATION

Chairman Mrs. Thaddeus J. Jasinski
 Co-Chairman Mrs. Peter J. Giannini
 Mrs. William Knapp Mrs. Joseph Stuart
 Mrs. Nathaniel Baskind Mrs. Abraham Schultz
 Mrs. A. L. Sluzynski Mrs. Nicholas Bruno
 Mrs. Adolph J. Jarosz Mrs. John Kasciato
 Mrs. Henry Lewandowski

COURTESY AND RESOLUTIONS

Chairman Mrs. Edward G. Warnick
 Mrs. Warren W. Young

	Mrs. Willard Scrivner
ELECTION	
Chairman	Mrs. Willard Scrivner
TIMEKEEPERS	
Chairman	Mrs. H. Kenneth Scatliff
	Mrs. H. Close Hesseltime
	Mrs. C. Paul White
READING	
Chairman	Mrs. Wendell Roller
REVISIONS	
Chairman	Mrs. Robert E. Dunlevy
	Mrs. Matthew E. Uznanski
	Mrs. Albert T. Kwedar
REFERENCE	
Chairman	Mrs. Nicholas Chester
1. Reports of Officers & Directors ..	Mrs. Henry Christiansen
2. Reports of Standing Committees ..	Mrs. Albert T. Kwedar

TICKETS	
Chairman	Mrs. Harold Dubner
Co-Chairman	Mrs. Edward C. Helfers
Mrs. William F. Bartelt	Mrs. Ephraim A. Grier
Mrs. A. F. Montezon	Mrs. Frank P. Kraft
Mrs. Roland Loring	Mrs. Alfred L. Pagano
Mrs. Mitchell A. Spellberg	
INSTALLATION OF OFFICERS	
.....	Mrs. Henry L. Schmitz
CONTINENTAL BREAKFAST	
Chairman	Mrs. Frederick J. Roos
Co-Chairman	Mrs. Robert E. Dunlevy
	Mrs. Joseph S. Lundholm
LUNCHEON, Tuesday May 19, 1959	
Chairman	Mrs. Carl Hagler
Hostess Branch	Adams County
LUNCHEON, Thursday May 21, 1959	
Chairman	Mrs. Ward Eastman
Hostess Branch	Peoria County

Make
Your
Hotel Reservations
For
The
Annual Meeting
Right
Now

AT THE EDITOR'S DESK



FOR THE BIRDS

There are reasons for everything. Sea gulls, petrels, penguins, marine ducks, birds, and reptiles do not develop sodium retention edema even though they ingest large quantities of salt from sea water. They have a nasal gland that excretes more sodium chloride than the kidneys do, according to Diuretic Review. Many patients with cardiac insufficiency would love to have this handy gadget.

RECENT FAD PROMOTIONS

The widespread newspaper and magazine publicity given to the relationship between fats in the diet and the blood cholesterol level has dredged up a rash of faddist products. The majority are aimed at the prevention of specific diseases, such as certain heart ailments, even though the claims made by the promoters are not supported by adequate evidence.

The FDA reports that fad promoters are offering vegetable oils for coronary thrombosis, infertility, and a hundred other conditions. Unsaturated fatty acids with or without minerals and vitamins, are being advertised for treatment of high blood cholesterol levels, in heart disease, obesity, and glandular disorders. The FDA is better equipped now to handle these problems and should stop this type of promotion before it gets out of hand.

OFFSHORE BREEZES

This coming summer is the time to vacation along the east coast of Florida. A release from the U. S. Department of Commerce states that

there is a three to one chance that the ocean between Daytona Beach and Canova Beach will be tempered to a mild 75 degrees because the prevailing winds will be offshore and blow the warm surface water out to sea. This conclusion was reached after analyzing the records of water temperature, sea level, and winds over a period of 18 years.

PRACTICE WHAT YOU PREACH

In the January issue of Geriatrics, Walter C. Alvarez tells a story about his friend, the late Professor Raymond Pearl of Johns Hopkins. Pearl was the first to present evidence that smoking might lead to premature death.

"In these days of active debate as to the dangers of smoking cigarettes," declares Dr. Alvarez, "many men might do well to turn back to the number of Science (87:216-217, 1938) in which Pearl discussed this subject. Toward the end of his life, Dr. Pearl made many academic enemies because of his forthrightness. One day, while on a trip, he got to feeling very tired, and some hours later he dropped dead from a coronary heart attack. In spite of his discovery that one of the great shorteners of life is the cigarette, he had remained a chain-smoker."

ANEMIA IN INFANCY

The Nutrition Foundation conducted a three year study on 272 cases of iron deficiency anemia in children ranging in age from three to 30 months. Many of these youngsters (31.1 per cent) were prematures or of low birth weights. There was a preponderance of males and a high

incidence of twins. Anemia was more common among the fourth or fifth sibling than among the first born.

RUSSIAN PENICILLIN

John E. McKeen, president of Chas. Pfizer & Co., Inc. calculated in terms of purchasing power that the Moscow worker pays more than four times as much for Russian made penicillin as we do for American made penicillin.

It is difficult to translate the ruble into the dollar. One approach is to compare the time it takes for a Moscow industrial worker to earn the price of a certain commodity with that of a worker in the United States. When an American goes to Russia he is told the retail price of penicillin is the cost price and that many drugs are subsidized by the government in order to hold consumer prices down.

SAVE

The Service Activities of Volunteer Engineers (SAVE) is a group of 35 Illinois Bell Telephone Company engineers who have volunteered their know-how to help medical research. They work on new instruments during their spare time and in one year have completed working models of a three-ounce device to count the human heart-beat while being worn during a full day of normal activity. A training machine to teach cytodiagnosis to laboratory technicians is virtually completed and considerable progress has been made on an electronic computer that instantaneously reports changes in the volume of air in the lungs of a baby in the hope of detecting the fast striking cystic fibrosis. In addition, they are working on an electronic isotope detector that is 10 times more sensitive than existing equipment for diagnosing brain tumors. Under development also is an electronic calorimeter that is a cumulative recording device to measure changes in body heat. This work is being done in consultation with the medical staff of the University of Chicago Clinics.

TWO FINGER GLOVE

Becton, Dickinson and Company now have a two-finger, interchangeable medical examination glove—the ACE medical glove. It is fashioned from their tough form fitting polyethylene and is disposable. A box of one gross takes the space required for storing 10 ordinary rubber gloves.

JUVENILE HORMONES

The extraction of hormones from insects is a delicate chore but it is being done in a search for new insecticides. Japanese scientists isolated 8,500 silkworm brains to obtain only two milligrams of hormones. Two German research chemists isolated 25 milligrams of hormones from the prothoracic gland of 500 kilograms of silkworm pupae. A few micrograms of this material caused prompt molting in a variety of insects.

According to Howard Schneiderman of Cornell University, many attempts are being made to isolate hormones from insects that prevent insect larvae from developing into adults. These “juvenile” hormones were found originally in the abdomen of a male moth and subsequent investigation has revealed such substances in other insects, including beetles and flies, as well as many invertebrates such as jellyfish, earthworms, crayfish, and sea cucumbers.

CLEANUP CAMPAIGN

“What you don’t see, won’t hurt you,” backfired recently when the FDA investigated the Beckham Candy Company of Atlanta. This firm makes hard candies and has been in trouble before. The recent action stemmed from a complaint from a family that found a piece of razor blade in a candy sucker. A seized shipment of candy disclosed such materials as glass fragments and rodent and insect filth. Plant inspection revealed a number of ways in which contamination could occur. There was broken glass in candy kettles not then in use. Glass salt shakers and drinking glasses were placed where they could be broken readily and fall into pots and pans and raw material containers were open and exposed to dust and insects. Trays of candy were found on the floor.

PHARMACEUTICALS

Dr. Robert C. Baldwin, Marshfield, Wis., reports on U. S. Vitamin & Pharmaceutical Corporation’s oral antidiabetic tablets:

“DBI, has been used in 27 private patients who have been under observation for up to six months. The ages ranged from 3 years to 84. The results have been excellent in 14, good in four, and poor in nine. We have been particularly impressed with its success in children and so far, have had good to excellent results with all six patients

under 14 years of age in whom it has been tried. It is our impression the preparation is more effective in children whose hyperglycemia and glycosuria are predominant during the daytime. The results with those who show rising blood sugar and increasing amounts of glycosuria in the early morning hours have not been as good. Among the failures, nausea, and vomiting necessitated discontinuing the drug in seven. Three other patients who had gastrointestinal disturbances were able to reduce symptoms and continue the drug by taking it after meals instead of before. It was not effective in three patients with long standing diabetes of the growth-onset type associated with degenerative vascular changes."

NEW USES FOR OLD DRUGS

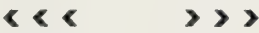
Dr. R. A. Miller (Scottish Medical Journal 3:441, 1958) has reported that Atabrine is of value in petit mal. Improvement was noted in 15 of 16 cases within a few days after therapy was started. Six youngsters became asymptomatic, and symptoms were less marked in nine. All had failed to respond to Tridione and other

anticonvulsants. We hope to see confirmation of this report.

McNeil's Flexin (zoxazolamine) shows promise of being of value in chronic gout. The drug has enjoyed a brief period of popularity as a muscle relaxant, but chemists discovered by chance that it caused excretion of large amounts of uric acid into the urine. The drug was given to patients with chronic gout; marked and continuous uricosuria occurred. The optimum dosage is not known but 125 milligrams three times daily is recommended at present. Flexin may prove to be a strong competitor of probenecid. It is said to be 46 times more potent. Its sister drug, Paraflex (chlorzoxazone), does not have the same effect.

REHABILITATION

Dr. Howard A. Rusk, director of the Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, is convinced that 90 per cent of all hemiplegics can be taught to walk and to attend to personal body functions via an active self-care and physiotherapy program. Fifty per cent can be taught to do gainful work.



Ideal marriage

In spite of all our rational convictions and all our love, marriage cannot but be a critical step, a venture, a leap into God's arms. Once it has been decided on one may well recollect Alain's words: "I have bound myself for life; I have made my choice. From now on my aim will not be to choose a woman who will please me but to please

the woman I have chosen." Even after what may have been in and by itself a wrong choice a marriage can be made into a splendid thing if God gives the necessary grace. It does not matter so much what one is at the moment of marrying, as the extent to which one is ready and able to change and improve. The qualification we most need for this is humility. *Theodor Bovet. Love, Skill & Mystery. New York, Doubleday & Co., Inc. 1958.*

THE P. R. PAGE

John A. Mirt



Medical care for senior citizens

Too much stress cannot be put on the need for providing medical care for our senior citizens—those who have passed the age of 65 and who are beneficiaries of social security.

This problem is definitely a public relations one. It has to be met within the confines of private enterprise, or it will lead to another step toward the socialization of medicine in this country.

The latest challenge has come in H. R. 4700, more popularly known as the Forand bill, introduced in the House of Representatives on February 18. Excepting for some change in details, the principle of the measure is the same as that contained in the Forand bill of 1958, that failed of passage.

The new measure proposes to add health insurance benefits to the existing social security system, the cost to be borne by successive increases in taxes. Judging by the experience of the past, if this bill becomes law a series of amendments can be expected over the years, putting more and more people under health care coverage.

The present bill has a provision that may serve to fool a lot of physicians because it calls for a plan under which there apparently will be a free choice of physicians and hospitals. The joker lies in the section requiring participating hospitals, nursing homes, and physicians to enter into a contract with the government and to subscribe to certain regulations.

These regulations are subject to the whims of

the secretary of the Department of Health, Education, and Welfare, or rather to the head of the division to which the implementation of the law will be delegated. In view of the fact that HEW is honeycombed with so-called “do gooders,” a gradually increasing restriction of freedom can be expected.

Certainly, it is not free choice when a patient is unable to obtain the benefits prescribed should he call upon his favorite physician who will have no part of socialized medicine and who refuses to sign up for the program. Certainly, it is not free choice if the patient cannot select his favorite hospital for the same reason. And, it is likely that most of the successful surgeons and the best type of hospitals will not become a part of the program because they have as many private patients as they can handle without sacrificing the quality of medical care.

There is another threat in the pending measure. Many minor surgical procedures are now being carried out in a physician's office. Some of these would be shifted to a hospital in order to take advantage of benefits resulting from hospitalization. This is not a surmise. We have seen abuses of this kind under voluntary insurance coverage. However, now we have some degree of control. Under a government plan, there likely would be none. The result would be such a tremendous overcrowding of hospitals as to be scandalous.

The alternative is for private enterprise—and that means the medical profession, everyone else identified with medical care, and the consumer—

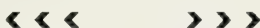
to come forward with a workable plan for taking care of those over 65.

To develop such a plan nationally will require some time. It must be worked out piecemeal on local levels.

Meanwhile, in order to gain time, it is imperative that the medical profession individually and collectively exert every possible effort to prevent the Forand bill from becoming the law of the

land. Every person depending upon medical care—and who does not—must be alerted to the dangers confronting him and must be informed of the progress being made to meet the problem in the traditional American fashion.

This is the time for action at the grass roots level. Lethargy will mean another step toward socialization.



Florida for hay fever and asthma

I have seldom seen an allergic individual sensitive to only one thing. I have seen many in whom one allergen predominated in which case, avoidance or treatment for that one allergen resulted in freedom from symptoms. This would be one factor in the patients who see no change in their condition—i.e., they didn't get away from all their allergens. House dust is a sensitizing agent in a large per cent of sufferers from asthma and allergic rhinitis. In any climate people live in houses. Who then would expect them to fall into any other category than those who get no benefit from the change? In a warm climate people do get out of the house more hours per day, the windows are open, the dust is not so concentrated, hence their exposure is lessened. This would account for some cases who are better but not entirely free of symptoms. *Frank C. Metzger, M.D. Further Observations of Climatic Treatment of Hay Fever and Asthma with Special Reference to Florida. Ohio M.J. Oct. 1958.*

Steroid replacement

Although one would assume from theoretic considerations that simple replacement of declined ovarian steroid levels in the female should suffice to halt and reverse the changes, we have learned through much trial and error that such treatment has certain disadvantages. Continuous support with estrogens alone in the female climacteric leads frequently to endometrial hyperplasia and breakthrough bleeding. Cyclic treatment with estrogens or with estrogens and progesterone results in periodic endometrial slough. While such vaginal bleeding, or false menses, is in itself not necessarily pathologic, it is far better to use a treatment, if available, which accomplishes the desired end result without substituting one type of worry for another. Combined therapy with properly balanced amounts of estrogen and androgen is now well established as fulfilling the essential requirements for physiologic steroid replacement in these patients. *G. Wilson Hunter, M.D. et al. Sex Hormone Support for the Castrate or Senescent Woman. J. Lancet Aug. 1958.*

NEWS of the STATE



COOK

MEETINGS. The program for the February meeting of the Chicago Society of Internal Medicine was: "Early Metabolic and Fine Structure Changes in Early Myocardial Ischemia," by W. B. Wartman, et al.; "An Evaluation of Revascularization Procedures in the Treatment of Coronary Artery Disease," by Emmanuel Marcus and William P. McKeever; "The Significance of Pulmonary Hypertension in Assessing the Risks of Thoracic Surgery," by Peter V. Moulder, Jr.

The program for the March meeting of the Chicago Neurological Society was: "Some Metabolic Studies in Cervical Spinal Cord Injuries," by Alex J. Arieff, et al.; "Alpha Asymmetry in E.E.G. of Organic Cerebral Lesions," by Francis J. Millen; and "Rare Cerebellar Ataxia with Metabolic Disturbance," by Benjamin Boshes and Manuel Mier.

At the March meeting of the Society of Medical History of Chicago John Chynoweth Burnham, University of Chicago, spoke on "Syphilis and the Revolution in Morals," and Ilza Veith, University of Chicago, spoke on "Hypnosis and Suggestion: Historical Reflections."

The Chicago Heart Association joined with the Chicago Pediatric Society for the March meeting. Drs. Benjamin Gasul and Robert Miller presented papers.

PRIVATE EYE. "The Truth About Your Eyes," a book by Dr. Derrick Vail, Northwestern University Medical School ophthalmology department chairman, recently was tape recorded by him for use in the Hadley School for the Blind,

Winnetka. Dr. Vail has dedicated the revised edition of his book, also in braille, to William A. Hadley, school founder, and has given copyright ownership to the school. The book, to be supplemented by plastic eye parts models, so that blind students can feel them, is being used as a text by the school for a new home study course, "The Anatomy and Diseases of the Eye."

GRANT. Dr. Thomas E. Starzl, department of surgery, Northwestern University Medical School, has been named one of 25 scholars in medical science by the John and Mary R. Markle Foundation of New York, to receive a grant of \$30,000 over a five-year period to support his teaching and research. The 25 scholars named this year were chosen from nominees from 65 medical schools. The program is designed to improve medical research and education by assisting some of the promising young teachers and investigators who too often find it necessary to forego academic careers to enter private practice.

Dr. Clifford W. Gurney, assistant professor of medicine at the University of Chicago and a member of the staff of the Argonne Cancer Research Hospital was the recipient of a similar grant. He is studying the use of the red blood cell hormone.

Eric C. Kast, M.D. has received a grant from Merck Sharp & Dohme Research Laboratories in the amount of \$1,000 for the investigation of a new hypotensive agent.

HOSPITAL NOTES. Michael Reese, one of the largest voluntary (non-governmental) medical

institutions in the country, has announced a new \$10 million building program.

At a joint dinner of the Provident Hospital trustees and medical staff in the Bismarck Hotel, Drs. Walter S. Grant, Clarence E. Thompson, Henry M. Trammel, James L. Hall, Sr., Talmage C. Henderson, and Edwin K. McDonald were elevated to the status of honorary staff members of Provident Hospital because of their many years of service.

Dr. Evangeline E. Stenhouse has been elected to a second term as president of the medical staff at Mary Thompson Hospital. Other officers are Drs. Eloise Parsons, president-elect; Ella Sandberg, vice president; and Elizabeth R. Fischer, secretary-treasurer.

HISTORICAL LECTURES. Dr. Francis L. Lederer, professor and head of the department of otolaryngology, University of Illinois College of Medicine, will speak on "The Evolution of Otorhinolaryngology and Bronchoesophagology" at the International College of Surgeons' Hall of Fame, 1524 Lake Shore Drive, Chicago, May 5. On May 21, Dr. Wayne B. Slaughter, clinical professor in charge of plastic surgery, University of Wisconsin, Madison, and Stritch School of Medicine of Loyola University, Chicago, will speak on "The History of Plastic Surgery" at the Hall of Fame.

MEETING. The spring meeting of the Chicago Society of Industrial Medicine and Surgery, held in March, discussed "Detection of Malingerings," with Dr. Horace E. Turner as moderator; and Drs. Ben W. Lichtenstein, Alfred Rasmussen, and Alfred A. Stonehill as participants.

REUNION. Northwestern University Medical School will hold its annual medical faculty-alumni reunion on Saturday evening, May 9 at the Furniture Club of America, 666 Lake Shore Drive, Chicago. The social hour will begin at 5:30 P.M. and dinner will be served at 6:30 P.M.

As for the past seven years, the musical show, which is written and staged by the medical students and student nurses from Passavant and Wesley hospitals, will be presented in Thorne Hall following the dinner. The title of this year's production of *Quo Vadis Medicus?* '59 is "A Little Culture."

Husbands and wives of faculty members and alumni are urged to attend the dinner and show. Reservations may be made at the Medical Alumni

Office, Northwestern Medical School, 303 E. Chicago Ave., Chicago 11, not later than May 6.

Special tables will be reserved for the five-year classes, beginning with 1904. All members of the 50-year class of 1909 will receive Golden Year Certificates. In addition, those attending from the classes of 1904 and 1909, and the graduating senior of 1959 will be the guests of the Alumni Association.

DEKALB

MEETING. Dr. C. Howard Hatcher, division of orthopedic surgery, University of Chicago School of Medicine, spoke on "Athletic Injuries" at the February meeting of the DeKalb County Medical Society.

DU PAGE

MEETING. Dr. Joseph Bordenave, Geneva, spoke on "The Rh Factor," at the March meeting of the DuPage County Medical Society.

FULTON

MEETING. Dr. Edward A. Piszczek, Field Director, Suburban Cook County Tuberculosis Sanitarium District, talked on "Some Common Health Problems," before the Fulton County Medical Society at the February meeting.

KANKAKEE

HONORED. Dr. Edwin S. Hamilton, who has resigned as chief of staff at St. Mary's Hospital, Kankakee, was honored recently at a luncheon in the hospital by physicians, sisters, and hospital personnel. A plaque citing Dr. Hamilton for his service to the hospital was presented to him by the Rev. Mother Mary Mercy, provincial superior. She also announced that the new hospital medical library would be dedicated to him as a memorial for the service he has rendered the community, the medical profession, and state and national affairs. Inscribed on the plaque was the following: "Sincere appreciation to Edwin S. Hamilton, M.D., for devoted and loyal years of service as Chief of Staff, 1924-1959 St. Mary's Hospital by the Sister Servants of the Holy Heart of Mary."

LAKE

MEETING. "The Role of the Physician in Disasters," was the topic of discussion for the March 10 meeting of the Lake County Medical Association.

LaSALLE

MEETING. Dr. William J. Blackwell, Evanston, instructor in obstetrics and gynecology, Northwestern University Medical School, spoke on "Obstetrical Problems," at the March Meeting of the LaSalle County Medical Society.

LEE and WHITESIDE

MEETING. Dr. Dexter Nelson, Princeton, spoke on "Coronary Artery Disease," at the joint February meeting of Lee and Whiteside County Medical Societies.

LOGAN

POSTGRADUATE MEETING. The Logan County Medical Society was host March 19 to physicians from Cass, Christian, DeWitt, Logan, Macon, Mason, McLean, Menard, Morgan, Piatt, and Tazewell counties at a luncheon at the Abraham Lincoln Memorial Hospital, which preceded a postgraduate conference. Among the subjects discussed were: varicose veins, recurrent hernia, poison control centers, and glaucoma. This conference was arranged by the Illinois State Medical Society's Committee on Postgraduate Medical Education and Scientific Service. Afternoon speakers included Drs. Anthony M. Barone of Chicago, Ward H. Eastman, and Fred P. Long of Peoria, and Frederick Crowley of Bloomington. Discussion leaders were Drs. Lee N. Hamm, Albert R. Siegel of Lincoln, and R. Lynn Ijams of Atlanta. Dr. Emmet F. Pearson, Springfield, committee member, presided at the afternoon session. Dr. Wilfred M. Spait, Atlanta, president of the Logan County Medical Society, presided at the dinner when Drs. Mitchell J. Nechtow of Chicago, and Jacob E. Reisch, Springfield, spoke.

McDONOUGH

MEETING. Dr. George W. Changus, Burlington, Iowa spoke on "Familial Intestinal Polyposis," at the February meeting of the McDonough County Medical Society.

PEORIA

MEETING. Dr. Arthur L. Scherbel, Cleveland Clinic, spoke on "Newer Concepts in the Diagnosis and Management of Rheumatoid Arthritis," at the March meeting of the Peoria Medical Society.

ST. CLAIR

MEETING. Dr. Carlo Caciolo, instructor of in-

ternal medicine, St. Louis University School of Medicine and director, Renal Laboratory at Desloge Hospital was the speaker at the March meeting of the St. Clair County Medical Society.

SANGAMON

MEETING. Dr. Robert D. Ray, department of orthopedic surgery, University of Illinois College of Medicine, spoke on "Bone Grafts and Bone Implants," at the March meeting of the Sangamon County Medical Society.

TAZEWELL

MEETING. Members of the Tazewell County Medical Society were invited to attend the March meeting at the Peoria State Hospital sponsored by the Illinois Psychiatric Society and Peoria Neuropsychiatric Society. The program is given in the Peoria news.

VERMILION

MEETING. Joseph Stetler, chief of the legal department of the AMA, was guest speaker at the March meeting of the Vermilion County Medical Society. "The Man Who Couldn't Walk," was the film presentation. The medical society meeting was held jointly with the Vermilion County Bar Association.

GENERAL

APPOINTMENT. Dr. Percival Bailey, professor of neurology and neurological surgery at the University of Illinois, has accepted an appointment as director of research with the state welfare department.

HONORED. Dr. Herbert E. Schmitz, chairman of the department of obstetrics and gynecology at Stritch School of Medicine, chief of staff at Lewis Memorial Hospital, and director of the department of obstetrics and gynecology at Mercy Hospital, was awarded the annual Laetare award by the Guild of St. Luke, Boston. The honor was conferred by Richard Cardinal Cushing and designates Dr. Schmitz as the outstanding Roman Catholic physician of the year for medical contributions.

MEETING. The following attended the February meeting of the Annual Blue Shield National Professional Relations Conference in Chicago: Drs. Percy E. Hopkins and Leo P. A. Sweeney, Chicago; V. P. Siegel, East St. Louis; C. Paul White, Kewanee; George B. Callahan, Waukegan; C. Elliott Bell, Decatur; Frederick L. Eihl and B. K. Ozanne, Moline; and L. P. Johnson, Wil-

liam W. Boswell, and J. Harry Bendes, Rockford.

LUNCHEON. The medical division, Northwestern University Alumni Association will hold a luncheon on Tuesday, June 9, during the meetings of the American Medical Association in Atlantic City, at the Chalfont-Haddon Hall, at 12:30 o'clock. Tickets for the luncheon are \$3.50 each; reservations may be made and tickets obtained at the Medical Alumni Office, 303 East Chicago Ave., Chicago.

NEW HOSPITAL. Governor William G. Stratton released \$4,431,963 on March 6, for construction of a new pediatric hospital for the mentally retarded. The hospital is to be located in the State Medical Center on Roosevelt Road between Ashland Blvd. and South Paulina St., Chicago. It will have space for 585 crib beds for use of the Illinois Department of Public Welfare for care and treatment of mentally deficient children. Infants whose retardation is due to severe neurological damage can receive needed hospitalization and the research and training programs will contribute to knowledge in the field.

MEETING. The third annual convention of the Illinois Medical Assistants Association was held April 18 and 19 at the Jefferson hotel in Peoria. Attended by representatives from all individual county Medical Assistants Associations, the program stressed educational advancements in the medical field and exhibits that will be of help to medical assistants in their future services to their employers and the physicians' patients.

Organized only a few short years ago, the Illinois Medical Assistants Association is developing into a strong state-wide organization with a steadily growing membership of representatives from the county associations.

The Illinois State Medical Society has approved the IMAA and works closely with it in its state-wide programs. The Society's advisory committee to the IMAA is comprised of Dr. Carl E. Clark, chairman; Dr. Newton DuPuy, Dr. Caesar Portes, and Dr. Arkell Vaughn.

"YOUR HEALTH COMES FIRST" OVER RADIO CHICAGO WJJD

March 25, at 7:15 p.m.: John P. McGovern, associate clinical professor of Pediatrics and Microbiology at Baylor University College of Medicine, Houston, Texas, presented some highlights on "The Management of Asthma in Infants and Children;" James G. Hughes, profes-

sor of pediatrics at the College of Medicine, University of Tennessee, Memphis, talked on "The Treatment of the Epileptic Child." These physicians appeared on the program of the Clinical Conference of the Chicago Medical Society, and had made a recording at that time.

April 22, 7:45 p.m.: R. Charles Oldfield, Jr., clinical assistant in surgery, Northwestern University Medical School, will talk on "Cancer of the Lung."

LECTURES ARRANGED BY THE ILLINOIS STATE MEDICAL SOCIETY:

A. Edward Livingston, Bloomington, who has been certified by the American Board of Internal Medicine, addressed the Henry County Medical Society in Kewanee, March 11, on "Diabetes."

George Z. Wickster, Clinical associate in obstetrics and gynecology at Stritch School of Medicine of Loyola University, addressed the American Slovak Civic Club of Cicero, March 19, on "The Menopause in Relation to Mental Health."

George H. Rezek, clinical assistant professor of obstetrics and gynecology, University of Illinois College of Medicine, addressed a group of women at the Austin Y.M.C.A., March 31, on "The Menopause."

Dexter Nelson, Princeton, who has been certified by the American Board of Internal Medicine, addressed the Sycamore Woman's Club in Sycamore, April 7, on "Factors in Keeping Healthy."

Thomas P. Saltiel, clinical assistant professor of pediatrics, University of Illinois College of Medicine, addressed the Jahn School Parent-Teacher Association, April 8, on "A Good Health Program for the School Child."

Hampar Kelikian, associate professor of orthopedic surgery at Northwestern University Medical School, will address the Englewood Branch of the Chicago Medical Society, May 5, on "Surgery of Chronic Arthritis."

John T. Grayhack, assistant professor of urology, Northwestern University Medical School, will address the Stock Yards Branch of the Chicago Medical Society, May 15, on "Diagnosis of Anuria and the Treatment of the Obstructive Causes of Anuria."

DEATHS

WALTER A. ADAMS*, Chicago, who graduated at Howard University College of Medicine, Wash-

*Indicates member of the Illinois State Medical Society.

ington, D. C., in 1926, died March 7, aged 58. He was chief of the psychiatry department at Provident Hospital, and of its clinic for narcotics addicts.

FREDERIC L. BARBOUR*, Chicago, who graduated at the University of Illinois College of Medicine in 1911, died February 10, aged 74. For 30 years he was a member of the staff of the Illinois Central Hospital.

LESTER E. BOWER*, Chicago, who graduated at Northwestern University Medical School in 1914, died March 3, aged 70. He was a former president of the staffs of the Illinois Masonic and Martha Washington Hospitals, and had been a staff member of Cook County and Lutheran Deaconess Hospitals.

ROY J. DEMOTTE*, Chicago, who graduated at Rush Medical College in 1912, died February 16, aged 77. He was chief surgeon for the Pullman-Standard Car Manufacturing Co. from 1923-1947.

MARTIN A. DOLAN*, Chicago, who graduated at Loyola University School of Medicine in 1932, died February 19, aged 51. He was a member of the staffs of St. George and Little Company of Mary Hospitals.

DAVID KYSER FARMER*, Mansfield, who graduated at the University of Louisville School of Medicine in 1935, died December 15, aged 49. He was health officer of Mansfield, and a member of the staff of the Burnham City Hospital in Champaign.

MAX P. GETHNER*, Chicago, who graduated at the University of Illinois College of Medicine in 1911, died March 4, aged 71. He was a member of the staffs of Norwegian-American, Columbus, and Michael Reese Hospitals. He was also staff physician for the International Ladies' Garment Workers Union, and a World War II medical consultant for the 6th Army Corps.

ROBERT HILT*, Chicago, who graduated at Medizinische Fakultät der Universität, Vienna, Austria, in 1909, died December 22, aged 74. He was clinical associate in medicine at the Chicago Medical School, and associated with Ameri-

can, McKenna, Weiss Memorial, Mount Sinai, and Forkash Memorial Hospitals.

WILLIAM A. JAMES*, retired, Oak Park, who graduated at Northwestern University Medical School in 1911, died March 3, aged 73.

ROBERT S. JOHNSTON, Chana, who graduated at the Illinois Medical College in 1904, died February 5, aged 87. He was a member of the Fifty Year Club of the Illinois State Medical Society.

FELIX A. MACKOWIAK*, Chicago, who graduated at Loyola University School of Medicine in 1919, died March 5, aged 63. He was a member of the staff of St. Mary's Hospital. He was president of the hospital's staff in 1953.

WALTER R. RHODES*, Toledo, who graduated at Rush Medical College in 1902, died November 29, aged 80. He was associated with St. Anthony Memorial Hospital in Effingham and the Memorial Hospital in Mattoon.

STEPHEN S. WERTH, Park Ridge, who graduated at Dearborn Medical College, Chicago, in 1905, died March 1, aged 80. He was medical director of the Reliance Life Insurance Company, Park Ridge.

CLAYTON E. WOODWARD*, Decatur, who graduated at Northwestern University Medical School in 1906, died February 13, aged 75. He was a member of the staffs of Decatur and Macon County and St. Mary's Hospitals; during World War I, he was president of the Decatur Medical Society; he served as president of the Decatur and Macon County Hospital staff in 1928 and was president of the Macon County Tuberculosis and Visiting Nurses Association in 1932 and 1933. In 1956, he was awarded the fifty year pin from the Illinois State Medical Society at a dinner meeting of the Macon County Medical Society.

LESLIE WINTERS YOUNG*, Fairfield, who graduated at St. Louis University School of Medicine in 1927, died January 24 in Port-au-Prince, Haiti, aged 59. He was a member of the Fairfield Board of Health, past president of the Wayne County Medical Society, and secretary-treasurer of the Little Wabash Regional Chapter of the American Academy of General Practice.

*Indicates member of the Illinois State Medical Society.



The ILLINOIS Medical Journal

Official Journal of The Illinois State Medical Society



MAY, 1959
VOL. 115, No. 5

Organized Medicine

PAUL A. DAILEY, M.D., CARROLLTON

Organized medicine is a complex mechanism and, in my opinion, the county medical society represents its most important cog. This organization is the sole judge of the qualifications of its members and election to membership determines the particular physician's future in ethical medicine. The county society is the foundation of the entire structure of organized medicine. Except for certain government service men, who are excused from component society membership, every physician engaged in the ethical practice of medicine from the obscure to the great, must belong to a component or county medical society. No other professional society in the country protects its member from encroachment on his rights as a physician, disciplines him, and provides the necessary springboard to greatness within the limits of individual attainments.

The structures rising from the basic county medical society are the state society and the American Medical Association. In addition, all specialty groups—such as the College of Surgeons, American College of Physicians, and the American Academy of General Practice as well as the professional staffs of hospitals draw their membership from the rolls of the county medical society.

The state medical society and the American Medical Association are service organizations that function primarily to serve the individual physician and the public at large, as illustrated by Article II of the Constitution and By-

laws of the Illinois State Medical Society:

"The purposes of this Society shall be to federate and bring into one compact organization the entire medical profession of the State of Illinois, and to unite with similar societies of other states to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standards of medical education. It is further the purpose of this Society to protect the public by education as to medical care."

Obviously the duties of the higher echelons are pretty well spelled out as service to physicians and to the public. Nowhere can I find the philosophy and the beliefs of the county medical society so spelled out.

These societies are faced with many problems. Poor attendance of the members at the scientific and business meetings and too many members who merely pay dues but do not appreciate the responsibilities, rights, and privileges of membership. Several component societies in Illinois fail to send delegates to the annual meeting of the House of Delegates; others fail to hold scientific meetings at stated intervals. Too often the requests of the political action group in the state society are neglected or are not pursued with a vigor that would bring to organized medicine the protection it seeks.

We need to revitalize our county medical societies. We must try to contact every member and make him realize his obligation to organized medicine. Some of these members might

respond if they could be made to realize the dangers of indifference. We all appreciate that if it were not for our faithful county and branch secretaries we would be much worse off than we are now. Presidents and vice presidents of county societies come and go, but generally the secretary stays on year after year, arranging the programs, usually attending the House of Delegates meetings, and performing numerous other tasks that no other member would follow through so faithfully.

Another approach to the problem of organized medicine is indoctrination of medical students, interns, and residents about the need for organization. I wrote the deans of the five medical schools in the Chicago area as follows:

One problem the medical society faces is the failure of the newer and younger members to participate wholeheartedly in the affairs of the society. There seems to be a failure to realize the importance of the society to them and to their patients.

Would you kindly answer the following questions:

(1) Is any time allotted in the teaching curriculum to inculcate the need for organization for better service to the people?

(2) Would you co-operate in an endeavor to bring the problems that medicine faces today in the socioeconomic field before the students?

(3) What would you think of the society's sponsoring a social hour, smoker, and/or meeting of upper classmen, at which time capable physicians would address the students?

(4) Would you comment on any ideas of yours, whereby graduates will be motivated to give concern to the future of medical societies?

Their replies were as follows:

NORTHWESTERN UNIVERSITY

Chicago, Illinois

THE MEDICAL SCHOOL

303 E. Chicago Ave.

October 2, 1958

Dr. Paul A. Dailey
525 South Main Street
Carrollton, Illinois

Dear Doctor Dailey:

During our lectures in Public Health, Pre-

ventive Medicine, and Industrial Medicine, some outline is given as to the place of organized medicine in the practice of medicine. However, the approach is quite limited.

As you probably know, we have a very active student AMA program and the vast majority of our students participate as active members of the SAMA. It is my personal opinion that medical societies should assume more responsibility in regard to acquainting medical graduates with the opportunities offered by organized medicine for better service to the people.

I feel that local medical societies should make an effort to see that interns and residents in the local hospitals participate in the programs of local societies. I know this activity is carried on in the North Suburban Branch of the Chicago Medical Society wherein the staffs of Evanston Hospital and St. Francis Hospital are inviting their interns and residents to the dinners, business meetings, and scientific programs of the Society.

The undergraduate medical school curriculum is just too crowded to incorporate a similar program, such as you have intimated could be carried out, during the student's medical school registration.

Sincerely,

RICHARD H. YOUNG, M.D.,

Richard H. Young, M.D.

Dean

LOYOLA UNIVERSITY

706 South Wolcott Avenue

Stritch School of Medicine

Office of the Dean

October 3, 1958

Paul A. Dailey, M.D.
525 South Main Street
Carrollton, Illinois

Dear Dr. Dailey:

This school each year gives to the senior students a series of lectures on office practice and on various items pertaining to medical organizations and economics. Among the topics included is one explaining the functions of local and national professional medical societies. Dr. Arkell Vaughn was assigned to give the lecture last year.

I do not know whether the Council of the

Medical School would authorize sponsorship by the Illinois State Medical Society of a social hour, smoker, and/or meeting of the upperclassmen for the purposes mentioned in your letter. I shall, however, bring your requests to the attention of the Council at its next meeting late in October and shall inform you of their action with regard to your requests.

Signed:

Yours sincerely,
JOHN F. SHEEHAN, M.D.,
Dean

UNIVERSITY OF ILLINOIS
COLLEGE OF MEDICINE

1853 West Polk Street
Chicago 12, Illinois

Office of the Dean

Doctor Paul A. Dailey
525 South Main Street
Carrollton, Illinois

Dear Doctor Dailey:

Thank you for your letter of September 22, 1958, in which you express concern over the failure of newer and younger members of the medical profession to participate actively in the affairs of the medical societies.

It is my belief that medical educators are in general agreement with the idea that young physicians should engage, as promptly as possible, in the activities of the professional societies at local, state, and national levels. It seems to me that this is necessary if the ideals and goals of the medical profession are to keep pace with new scientific advances and with new concepts of patient care as well as with changing socioeconomic circumstances in which the practice of medicine is carried on. In regard to your specific questions I would comment as follows:

1: In the ongoing, day by day teaching (especially in the medical, surgical, pediatric, and obstetric clerkships), the principles of good medical practice and ethics are emphasized both by instructional comment and by example on the part of the clinical teachers. In addition, in formal and informal conferences with students, especially in the junior and senior years, an attempt is made to guide students in the formulation of proper motivations, attitudes, and habits for their future roles in the practice of medicine and in the acceptance of civic responsibilities.

2: Our instruction committee is, and will continue to be, concerned with the problems that medicine faces today, including the social and economic areas, and the College of Medicine departments have developed teaching exercises pertaining to these matters. It is my impression that our faculty believes that student understanding of all of the principles of good medicine and patient care practices, as well as personal physician responsibilities, can best be taught in an integrated and comprehensive program rather than by a segmental approach in which dependence for student learning is placed on segregated component parts.

3: I would see no objections to the state or county medical society inviting medical students in their advanced years, perhaps senior year, to an off-campus social hour or smoker where they might meet and hear physician representatives of the medical society. If such an occasion were to be scheduled, it should in my judgment, be planned in the evening or on a Saturday or Sunday afternoon or evening when there would be less likelihood of competition for student time and interest.

4: I have the following additional comments:
(a) I wonder if the contact you might wish to arrange might not be more productive at the level of training and experience of the intern and resident rather than in the undergraduate years.

(b) I wonder also if the student, intern, and resident organization known as the Student American Medical Association which has its own publication entitled "The New Physician" and its own meetings and forums might provide a mechanism by which your objectives might be approached.

Let me assure you more that we have a deep interest in providing our undergraduate medical students with the best possible means to develop into a responsible, well-rounded, and competent physician. Members of our faculty will continue to recognize the need for encouraging the student to prepare himself for participation in all medical affairs when he achieves the position of a practicing doctor.

Signed:

Sincerely yours,
GRANVILLE A. BENNETT, M.D.,
Dean

THE CHICAGO MEDICAL SCHOOL

710 S. Wolcott Ave.

Chicago, Ill.

Office of the Dean

October 20, 1958

Dr. Paul A. Dailey

525 South Main Street

Carrollton, Illinois

Dear Doctor Dailey:

Dr. Sheinin is away from the city attending meetings and on school business, and has requested me, in his absence, to reply to your letter.

I will comment on each of the four questions, in order, as listed.

(1) We have no course in which the role of organized medical societies is specifically taught. We have, however, for a number of years held an Orientation Program at which we have had as scheduled speakers: the Secretary of the Illinois State Medical Society; the Secretary of the AMA Council on Medical Education and Hospitals, and on one occasion, the President of the Chicago Medical Society; and also Mr. Frank Dickinson, Secretary of the Committee on Economics of the American Medical Association. The students are introduced at once to the Student American Medical Association and most of the freshmen join this organization. I suppose you are entirely familiar with the Student American Medical Association and its objectives. I had the pleasure of sitting with Dr. Warren Cole as Faculty Advisors at the time the Student American Medical Association was organized. I think this organization accomplishes a great deal toward orientating the medical student to organized medicine.

(2) We would be glad to co-operate in any procedure that had the approval of the American Medical Association and the Association of American Medical Colleges.

(3) We would be glad, I am sure, to have the Illinois State Medical Society sponsor a social hour or smoker for upper classmen with speakers as suggested.

(4) In the Chicago area I think there is already a strong influence in motivating medical students toward medical societies because of the meetings of the Illinois State Medical

Society, Chicago Medical Society, and the American Medical Association, as well as other organized societies. Our students attend these meetings regularly in large numbers and are urged to do so by our clinical teachers. The same thing applies to internships and residencies in the Chicago area.

We should be glad to have any constructive suggestions.

Signed:

Sincerely yours,

A. H. RYAN, M.D.,

Dean of Students

THE UNIVERSITY OF CHICAGO

Chicago 37, Ill.

THE DIVISION OF THE BIOLOGICAL SCIENCES

Including the School of Medicine

Office of the Dean of the Division

September 29, 1958

Dr. Paul A. Dailey

525 South Main Street

Carrollton, Illinois

Dear Dr. Dailey:

I shall do the best I can to answer your questions as they pertain to this particular school.

As you probably realize, there are two types of teaching, one of which relates to the assignment of hours for specific purposes and subjects, and the other is that "intangible" type wherein the physician — in discussing surgery, orthopedics, pediatrics, and what-not — brings in the questions relating to organizational needs for better medical service, and socioeconomic problems.

However, to be more detailed:

1. We have for many years included lectures and discussions on types or organizations for health services for the total people. This includes federal, state, and local health agencies; professional societies; specialty boards; and organized societies.

2. I believe we are doing as much as time permits in our curriculum to include a rather full presentation of the growth and development of clinical practice of medicine in this country and elsewhere, the evolution of the hospital as a health service institution, organization of the hospital medical staff, socioeconomic problems in medicine, principles of

health insurance, and the development of public health practices at all geopolitical levels. Most of this is done by our faculty, but to assist we do have outside lecturers with particular information.

3. I believe that not only material on the socioeconomic and public health problems should be included in the medical curriculum but also that most of the medical schools are giving increasing attention to teaching about provision of medical care. Students gain a great deal of some of this in their direct association with patients who have various types of health insurance policies.

4. Particularly with the growth of innumerable specialty bodies within medicine and of such organizations as the Academy of General Practice, and even an increasing number of small hospitals with medical staff organization, I suspect the local medical societies may have been affected. This is not to imply that the medical societies' role is past — quite the contrary. What I am trying to point out is, it no longer is the one and only agency which can continue to serve all the sub-specialties in the promotion of the art and science of medicine and public health as well.

Personally I think the AMA and the local medical societies are doing a great deal by inviting students — and actually subsidizing them — to organizational meetings, particularly the scientific ones.

It seems to me that the Student American Medical Association is probably the best medium to kindle interest in the work of the local medical societies.

At this particular hospital, the Jackson Park Branch of the Chicago Medical Society holds all of its meetings here and the entire staff is invited. I think this might also be a way in which the role and function of medical organizations can be demonstrated.

I think the problem you are going to talk about is terribly important. It is always unfortunate in a democratic society that most play a rather passive role, leaving a major portion of the work to a few diligent and dedicated souls. This is particularly true in elections where all too few avail themselves of the privileges yet complain loudly and bitterly the way things are run.

I do not know whether or not this material

has been helpful to you, but I would be glad to discuss it further if there are specific points you wish to ask.

Signed:

Sincerely yours,

L. T. COGGESHALL, M.D.,
Dean

Excerpts from the reply of Mr. Russell F. Staudacher, Executive Secretary of the Student American Medical Association, are as follows:

I should like to mention, first of all, the continuing and growing spirit of co-operation being fostered between the national, state, and county medical organizations, and our own particular Association of medical students, interns, and residents. I am sure you are aware of our closeness to the AMA wherein we twice each year have two members of the House of Delegates who serve without vote but in each case are called upon to tell of our progress and plans and their reception is most cordial. Without exception our representatives in the past have acquitted themselves with honor, and I am sure they have helped the members of the AMA's House of Delegates understand the importance of working more closely with these young men who some day soon will be colleagues.

The same spirit mentioned above is prevalent throughout most of the State Medical Societies. I personally feel, however, that we have a great deal of work to do in your particular State of Illinois, and in view of the fact that we have five excellent medical schools right here in the Chicago area, there is a great opportunity for the development of a program which will bring your Society and ours much closer together in so many avenues of mutual interest and endeavor. Just yesterday I received a phone call from Dr. Kenneth Scatliffe in which we discussed this same problem. I promised we would soon get together for the purpose of discussing and perhaps outlining the program which would bring to our Association and to the State Medical Society of the rewards which have been the lot of states where active programs have long been in existence.

Many state medical societies invite the individual Student AMA chapters in the state medical schools as members of the House of Delegates during the annual state society meetings. While they do not have a vote, they have

the opportunity of being recognized and of observing the excellent programs and committee reports of the state societies. In many states at the county society level our folks are invited to attend the periodic meetings of the medical society's councils where they get even closer to the heart of organized medicine and find out how many and how diversified are the interests of the men who give time from busy practices to further the over-all work of the medical profession.

At our annual conventions which are held in Chicago every two years out of three we have additional opportunity to present to our members and to those representing the 75 member schools of the Association the work of those in organized medicine. In our exhibit section we have exhibits by the various medical organizations, such as the Academy of General Practice, the College of Surgeons, College of Radiology, and other groups, all of whom have an interest in attracting the young men of medicine in to their particular organizations when the opportunity arises. In addition they have a chance to exchange ideas and gain some insight into the thinking of the young men who some day will take the roles as leaders in all of these particular medical organizations.

I should like to think that you are acquainted with our monthly publication "The New Physician" which is sent to more than 53,000 medical students, interns, and residents each month. It is by circulation the second largest medical journal in the world, and the content is designed to supplement the intense scientific training gained in medical school with all of the other factors which so closely affect the everyday practice of medicine.

A good example of the type of co-operation extended by a state society is that of the California Medical Association where twice annually they present a full day's program for the members of the Student AMA. chapters in both Los Angeles and San Francisco, dedicated essentially to the work of organized medicine and the role that they as doctors will play in it. The subject matter of these conferences covers the entire gamut from malpractice to the role of the doctor's wife in the medical and civic community. At noon they sit down together at a luncheon which usually is presided over by the president of the state society. The experience throughout

the past several years has indicated to the officers of the California Association the wisdom of initiating the series.

I must apologize for the lack of specifics in this reply, but I am sure you realize the problem it becomes when our entire effort is expended in introducing the young men in medical schools and hospitals to organized medicine so that when they once become eligible to join your society or other groups you will not have to waste valuable time nor money on the reason for your existence. We hope that within the near future our past members will be taking their rightful role as members of the House of Delegates of the state and national medical organizations.

If you will study these responses you will see that there is an awareness on the part of all of these responsible men to the needs of organized medicine as a way of life.

DISCUSSION

I believe that county medical societies should indoctrinate these young men with their responsibility to organized medicine upon starting to practice. We dues paying members of county medical societies have a stake in the education of these young men. On a compulsory basis, we in Illinois have given over \$1 million since 1953 to maintain medical schools and medical education.

Another problem facing organized medicine is that, in our desire to stay away from the government sponsored compulsory health programs, we have taken to our bosom numerous voluntary health programs. Most of these insurance companies are reputable but it is inevitable that swindlers and unscrupulous insurance firms will climb aboard this gravy train.

We physicians, bound by ethical standards, are opening our confidential files to any and every insurance company, regardless of its merits. I am certain every physician has found his patient-doctor relationship jeopardized at one time or another by the claims these insurance companies have made to the people, which could not be substantiated on the basis of the contract.

Another criticism is that too many physicians do not vote. How can we hope to win friends and influence our legislators, if we stay away from the polls on election day? Last November 4 the Illinois Academy of General Practice started its meeting in Chicago. Nowhere on their

printed programs was there a suggestion to vote before leaving home. On the national scene, six large meetings were in session in various cities between November 1-8. All took physicians away from the polling places at a critical time in the history of organized medicine. The men who plan these conventions must be oblivious to the vital stake organized medicine has in the future of our country through the ballot box. Perhaps they are disdainful of the political action groups in organized medicine.

SUMMARY

The county medical society is basic in organized medicine. It is the only organization that gives equality to each individual member. Without it, the specialty groups would lose their anchor and sooner or later their special interests

would overshadow the broad picture of medical practice.

The state society and the American Medical Association are primary service organizations for the physician and the public. We must give concern to the members who are merely dues payers.

We have a stake in the education of the modern physician and the physician of the future. While no strings should be ever attached to the \$1 million already contributed by members of the ISMS and to the \$1 million physicians will contribute in the future to their education; nevertheless, we should follow through and orient the student, intern, and resident about the need for organization.

We should give concern as to whether our medical societies are progressive and streamlined to meet the needs of the physician of tomorrow.



Two-way radio conferences

A two-way radio conference program of postgraduate education has been established and operated from the Albany Medical College for almost three years. Any standard home FM receiver within the reception radius of about 150 miles of broadcast antenna on Mt. Greylock, Massachusetts, can receive the signal at 90.7 megacycles. The program has proved successful in fulfilling an important need in an extremely efficient and practical manner for both practicing physicians and members of the medical college faculty. It offers the potential for faculty members of several different and geographically

separated medical colleges to pool their efforts in presenting live, intimate, postgraduate education programs with no loss at all in travel time. It makes the practicing physician an integral part of the program when he is able to join it at a participating hospital and allows him to retain his anonymity when he wishes. It offers to every physician within reception radius an opportunity to listen in on a stimulating educational program with his own FM receiver in his home or office, even if he cannot join a participating hospital group. *William P. Nelson, III, M.D. and Frank M. Woolsey, Jr., M.D. Three Years of Experience with Two-Way Radio Conferences. New York J. Med. Oct. 15, 1958.*

Experiences With the Lente Insulins In Diabetic Children

ALVAH L. NEWCOMB, M.D., AND HOWARD S. TRAISMAN, M.D., CHICAGO

Since 1922, when insulin was first discovered, many modifications have been tested, and several have been made available for clinical use. No single preparation has been entirely satisfactory, although various combinations of insulins have been used. Recently a new modification, lente insulin, has become available. Developed in the Novo Laboratories in Denmark, it was first described by Hallas-Moller in 1951.¹ Since then a number of reports have indicated that this insulin has a definite place in the treatment of diabetes mellitus.^{2,3,4,5,6,7}

The production of lente insulin is based on the recent discovery that insulin, together with a small quantity of zinc, the combination precipitated in an amorphous or crystalline state, has a protracted effect. Various modifying agents such as protamine, globin, histone, and surfen, which are foreign proteins, are not necessary. By using an acetate buffer, instead of the commonly employed phosphate buffer which combines zinc, and by carefully regulating the pH during precipitation, combinations of zinc and insulin can be produced in two different physical forms. The amorphous form, designated semi-lente, shows only a slight prolonged action, approximately 12 hours. The crystalline form designated ultra-lente, has a very low, solubility and shows a range of activity of more than 30 hours. The zinc content of both preparations is the same as in protamine zinc insulin, 2 mg. per thousand units. The pH of the preparation is 7.2. A mixture of these two forms consisting of 70 per cent of the ultra-lente and 30 per cent of the semi-lente has been designated lente insulin and has a range of activity of about 24

hours. The mixture used in our study was furnished by the Eli Lilly Company.

The preliminary report by Hallas-Moller¹ indicated that satisfactory control of blood sugar could be obtained in a large number of difficult cases of diabetes mellitus with a single daily injection of an appropriate mixture of semi-lente and ultra-lente insulins. Peck et al.² concluded that the ratio of 30 per cent semi-lente to 70 per cent ultra-lente generally was most useful; its action was similar to NPH insulin and in occasional cases, somewhat longer in duration.

Ultra-lente insulin is primarily used to prolong the action of lente insulin. Thus, one may be able to control juvenile diabetics who show low levels of sugar during the day, and higher levels during the night and in the early morning. The amount of ultra-lente can be increased or decreased, depending upon the patient's response.

Semi-lente insulin is excellent for the patient whose fasting blood sugar may be normal but who has glycosuria between breakfast and lunch time because he reacts slowly to insulin. Semi-lente insulin is most frequently used to hasten the action of lente insulin. The amount of semi-lente insulin can be varied as the need arises.

It must be remembered that while these three lente insulin preparations can be mixed with one another, they must not be mixed with other modified insulins.

METHODS OF STUDY

Children were studied in private practice and in the diabetes outpatient clinics of the hospitals whence this paper originates. All patients received a weighed diet of approximately 3 to 4 gm. of protein per kilogram of body weight, with a protein to fat to carbohydrate ratio of approximately 1:1:2. The total caloric value was ap-

From The Department of Pediatrics, Northwestern University Medical School; Children's Memorial Hospital, Chicago; and Evanston Hospital, Evanston.

appropriate for their ages and ideal weights. The division of calories among the three main meals was approximately equal and varied only slightly in the individual patients when it seemed that extra food at a particular meal controlled the hypoglycemic tendencies following that meal. The weighed diets were maintained at home and in the hospital with slight variations in the amount of the mid-afternoon and bed-time feedings. A few patients also received mid-morning feedings.

The activity of the patients was unrestricted. They were required to test their urine with Clinitest® tablets three to five times daily, and to record in a notebook in appropriate colors the presence or absence of glycosuria. In the hospital the patients' urine similarly was checked four times daily, frequent fasting blood sugars were determined, and 24 hour urinary glucose was determined quantitatively. The activity of hospital patients was unrestricted within the ward but was generally less than at home.

The estimation of clinical control was based on the patient's well being, freedom from symptoms, and normal weight gain. If acetone appeared in the urine, or glycosuria appeared in more than half of the daily urine specimens, or mild reactions occurred, control was considered unsatisfactory and readjustment of the insulin dosage or diet was made. Under the conditions of the study, it was impossible to set up more rigid criteria of satisfactory control. Parents were questioned about the general condition of the child, and their observations were recorded in the patient's chart. This study is based upon these observations. Laboratory studies, other than the simple urine tests for sugar and acetone, were used primarily as an aid to achieving good clinical control. All the children in this study had had diabetes mellitus for at least one year, and some as long as 8½ years. The average duration of the disease was three years. Diagnosis was made on these patients because they had symptoms that led to the testing of their urine, and the discovery of glycosuria.

Thirty children with diabetes mellitus have been receiving various mixtures of the lente insulins for periods varying from two to 32 months. They were studied because of poor control of glycosuria and/or frequent hypoglycemic episodes.

Twenty-one received equal parts of semi-lente

and lente insulins. Of these children 15 had persistent late morning or noontime glycosuria with lente insulin and regular insulin in combination, and six children also had afternoon hypoglycemia. Results were considered good if there was better control of glycosuria, and less hypoglycemic reactions. The minimal trial period was two months. Of this group, eight were unimproved or considered failures; two still were erratically controlled and are considered "brittle" diabetics; and six were not consistently free of hypoglycemia and/or glycosuria. We are attempting to find a suitable mixture for them; otherwise we will be forced to classify them also as "brittle" diabetics. The other 13 diabetics were much improved.

The following nine patients received various mixtures of the lente insulins for primarily the same reasons as the above 21 children. Results were good in this entire group.

Two patients received equal parts of semi-lente and lente insulins plus regular insulin, in one injection; two patients received a 40-60 per cent mixture of semi-lente and lente insulins; one patient received a mixture of 45 per cent semi-lente and 55 per cent lente insulins; one patient received a mixture of 60 per cent semi-lente and 40 per cent lente insulins; one patient received a mixture of 60 per cent semi-lente and 40 per cent ultra-lente insulins with regular insulin; one patient received a mixture of equal parts semi-lente and ultra-lente insulins; one patient received a 1:3 mixture of semi-lente and ultra-lente insulins.

The need for prolonging the action of lente insulin by increasing the amount of ultra-lente insulin in the mixture has not been encountered by us to date.

DISCUSSION

Our observations of 30 juvenile diabetic children have shown that mixtures of semi-lente, ultra-lente and lente insulins, individually adjusted, are effective for better control of the patient's glycosuria and/or hypoglycemia. In three patients we found it necessary to add some regular insulin to the above mixture dosage.

Two patients complained of a stinging sensation after injection of semi-lente and lente mixtures. However, after a few days no further complaints were heard. Ferguson³ and Gurling⁴ had to vary the percentage of semi-lente and

ultra-lente insulins in the mixtures they used for adequate control of their juvenile diabetic patients. The indications for the use of the lente insulins include difficult control with other insulin preparations, the avoidance of multiple injections, and allergy to other types of insulin.

Preliminary clinical reports from 21 investigators⁸ with the use of lente insulin mixtures with 91 diabetic children shows good results in the large majority. Murray and Wilson⁹, and Drury¹⁰ also have successfully used the lente insulins in the treatment of diabetes mellitus. We have seen no unusual reactions to the lente insulin mixtures.

SUMMARY

Thirty diabetic children were observed while using semi-lente, ultra-lente, and lente insulins in mixtures of various proportions. Twenty-two had less hypoglycemia and/or glycosuria with the specific mixture that best fit their individual need. We believe that these lente insulins are a valuable addition to the present available insulin preparations.

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In miniature

There is a fascination in holes. I met a young man the other day, bright-eyed and bursting to tell someone that he had been in a subterranean passage. And I can remember the joy with which I used mentally to enter my doll's house through French windows, which led to the dining room. I had to put my eye down to about three inches from the floor and gaze in. There was a hatch to the kitchen and a door opening to the hall, but they only added to the miniature reality and did not spoil the isolation of the retreat. There were penny chairs, a sixpenny table (made in Germany), and a less good piano. While I con-

templated the secret treasures, a tiny vase, a silverlike tea set, and the tinsel embers in the fireplace, I had the confident feeling that no grown-up would come down to look too. That encirclement of space was all my own and I was withdrawn from the outer world however many other people were about. All this came back to me the other day as I sat for an hour or more while someone continually titivated the hole in my tooth. He had his mirror and light and gazed in silence into the cavity. Was he allured by a chamber no one else could see? I have often wondered what makes people choose to be dentists; perhaps at last I have stumbled on the answer. *In England Now. Lancet Jan. 31, 1959.*

Does Rigid Control of the Blood Sugar Prevent the Cardiovascular Complications of Diabetes?

HENRY T. RICKETTS, M.D., CHICAGO

More than three-fourths of the deaths among persons with diabetes are caused by cardiovascular-renal disease. One-half of all deaths in such patients are attributable to arteriosclerotic disease of the heart.

The implication is plain that some factor (or factors) associated with diabetes predisposes to vascular degeneration. Such a factor could be related to biochemical abnormalities, known or unknown; genetic or constitutional tendencies, transmitted along with the diabetic trait; or both. This classification of possible causes is oversimplified but space does not permit elaboration.

The notion that biochemical influences are important is strengthened by the fact that, with some exceptions, diabetes must be present for years before vascular disease becomes clinically apparent. It would seem that ultimately the vessels yield to the prolonged insults of a basic metabolic disturbance.

The outstanding chemical abnormalities of diabetes are hyperglycemia and hyperlipemia. There is no reason to believe that high concentrations of glucose, of the degree ordinarily present in diabetes, damage blood vessels.

What about serum lipids and cholesterol? They may be considered together even though they belong to different chemical classes for, despite wide disparities in special situations, their variations are in general in the same direction. The evidence linking these substances to atherosclerosis in nondiabetic subjects has reached impressive proportions, although a cause and effect relationship has not been proved. The question is whether

diabetic subjects have sufficiently higher serum lipid levels to account for their far greater predilection for atherosclerosis. Although very high concentrations of blood lipids characterize the patient in acidosis, surprisingly little is known about these substances in the long term diabetic—who is, after all, the patient in whom vascular disease eventually develops. Available data indicate that hypercholesterolemia in treated patients with diabetes of long duration is neither much more frequent nor marked than in nondiabetics of comparable age.¹ It must be admitted, however, that no one knows precisely what lipid levels are atherogenic and what are nonatherogenic for any individual.

We turn now to the Kimmelstiel-Wilson lesions of the kidney and the microaneurysms of the retina, seen almost exclusively in diabetes. While lipid deposition occurs in these locations, especially in the glomeruli, it is uncertain whether this precedes or follows the fully developed lesion. The common finding of hyperlipemia in these cases may have no more significance than its likewise common occurrence in some nondiabetic varieties of renal disease. The fact that the renal and retinal lesions stain with the periodic acid Schiff reagent, and presumably contain complex carbohydrates, has led to studies of serum mucopolysaccharide concentrations. These are somewhat higher in diabetics with nephropathy and retinopathy than in those without, and higher than in normal individuals.² They also are elevated in a wide variety of other diseases and their relationship to the complications of diabetes is far from established.

We must admit that we are unable to designate with certainty any biochemical feature of diabetes that favors vascular degeneration. It is logical to inquire, therefore, whether hereditary or constitutional factors may be involved. One reason

Professor of Medicine, The University of Chicago.

While the Nutrition Committee of the Chicago Heart Association is sponsoring this article, the opinions expressed are those of the authors and do not necessarily represent the official view of that committee.

for suspecting such factors is that some patients with poorly controlled glycosuria of many years' duration have little or no detectable vascular disease whereas others with obviously mild diabetes of apparently brief duration have a good deal. Diabetic retinopathy has been demonstrated ophthalmoscopically, and nephropathy by needle biopsy, in cases of diabetes so mild, diagnosis could be made only by a glucose tolerance test.

Despite these suggestive observations, it has been impossible to prove the existence of hereditary influences in diabetic vascular disease. Moreover, there are a few case reports indicating that the diabetic state itself may be responsible. These describe the appearance of specific vascular lesions some years after the induction of diabetes by total extirpation of the pancreas for gross disease of that organ in patients with no known familial disorder.³ It is difficult to exaggerate the importance of these unintentional experiments. They render it highly probable that some nongenetic abnormality of unknown nature associated with insulin deficiency is capable of initiating pathologic processes in blood vessels. If this abnormality could be regarded as operating in a constitutional milieu that has already provided a susceptible vasculature, we might have a rational if unproved explanation of our clinical observations.

This lengthy background has been a necessary prelude to a consideration of whether rigid control of diabetes prevents cardiovascular disease. The question is pertinent only if we grant the possibilities that biochemical aberrations, even though unidentified, have something to do with the case and that such chemical changes are likely to be proportional to the general level of the blood sugar.

The difficulties of determining the effect on vascular disease of good or poor control of diabetes are considerable. It is necessary that a large number of patients with fairly severe diabetes be studied by the same observers over a period of 15 to 20 years; that the habitual, not just occasional, levels of blood and urinary glucose be ascertained by records of home urine tests and frequent chemical analyses; that practical standards for classifying the degree of control be set up; and that careful clinical examinations be performed at intervals. It is the rare office or clinic that can carry out such a program. The Joslin group has done the best job of it and their re-

sults, so far as retinopathy is concerned, are given in the following table:

RETINOPATHY IN 189 PATIENTS WITH DIABETES OF 20 TO 29 YEARS' DURATION*

Degree of Control	Number of cases	Per cent of Cases	
		No, or Slight Retinopathy	Moderate Marked or Extreme Retinopathy
Good	32	76	24
Fair	41	52	39
Poor	116	33	67

*From Root, Pote, and Frehner.⁴

All of the patients had severe diabetes with onset at a young age.

These data probably portray the true situation as fairly as any could. They indicate that the great majority of patients under good control have little or no retinal disease while the great majority under poor control have relatively severe lesions. On the other hand, the fact that 24 per cent of patients under good control had severe retinopathy and 33 per cent of those under poor control had little or none means that glucose levels are not the sole determinant of retinopathy. Our understanding of the whole problem would be greatly advanced if we knew the reasons for these discrepancies.

A similar relationship between control and diabetic renal disease has been demonstrated by the same group.⁴ Whether it holds for atherosclerosis is less certain, for here, unlike retinopathy and nephropathy, the elements of age and involvement of the general population confuse the picture.

Regardless of theory, and in the present state of our ignorance, it is safe to adhere to the dictum that what is normal is good. Until someone shows it unnecessary, we should strive for good control of the blood sugar, knowing that it does no harm and in many cases probably minimizes or delays if it does not prevent vascular disease.

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Chronic Follicular Pustular Diseases of the Scalp

HAROLD SHELLOW, M.D., CHICAGO

UNDER this heading I have included only diseases identified by chronic and recurrent pustular infections of the scalp that lead to destruction of the hair follicles and scarring. These diseases are characterized by their rebellious nature and progressiveness, usually despite treatment. Only in recent times, with the use of the broad spectrum antibiotics and the corticosteroids, have these disorders at least been brought under control, if not eradicated.

ACNE NECROTICA MILIARIS (*Pustular Perifolliculitis*)

Acne necrotica miliaris of the scalp is a form of folliculitis constituting a typical clinical entity. It generally occurs in the middle-aged and is characterized by the development of few to many tiny, superficial vesicopustules that are discrete, isolated, and intensely itchy. The intensity of pruritus is out of all proportion to the visible signs of the disease. Scratching leads to rupture of the lesions and the formation of shallow crusts which, upon healing, leave little scars. To this disorder Ormsby has given the name "pustular perifolliculitis." When it persists, the hair become thin as a result of scarring. Dandruff plays no part in the cause. Most observers believe it is a resistant form of a staphylococcal infection. It should be differentiated from impetigo, furunculosis, and particularly folliculitis decalvans.

FOLLICULITIS DECALVANS

Folliculitis decalvans is a chronic, follicular, inflammatory process of the scalp that resembles

or has something in common with lupoid sycosis. The disorder begins with pustules or miliary abscesses involving the hair follicles. In the early stages, the hairs pierce the suppurative lesions and loosen and fall, after which the follicles atrophy and the hairs do not regrow. The disease begins in a localized area and the lesions become irregularly disseminated about the scalp producing patches of various sizes and shapes. The follicles remain distinct and are not fused. New follicles become involved at the periphery, while centrally, the process eventually subsides leaving a dead white, thin, depressed, and atrophic skin, with permanent hair loss. In older cases, the inflammatory pustules are seen only in the periphery of the patches and as they undergo involution, superficial crusts remain which, on healing with the loss of hair, leave tiny red spots. The spread of the disease may continue after active evidences of the inflammation have disappeared. In severe cases, the whole scalp may become involved but, telltale small tufts of hair usually escape.

DISSECTING CELLULITIS OF THE SCALP (*Perifolliculitis Capitis Abscedens et Suffodiens*)

This disease of the scalp, which may be considered one of the pyodermas, is not unlike its counterpart in the axillae and groins (hydradenitis suppurativa), the severe cystic acne (acne conglobata), and pyoderma faciale. It is characterized by multiple abscesses of the scalp with undermining and with a granulomatous cellulitis. Many small and large nodules develop that may be solid or present fluctuation. The fluctuant ones finally rupture to produce chronic draining sinuses that intercommunicate by burrowing. The fluctuating lesions frequently are connected with the sinuses and a probe may be passed through openings on the surface, that may be

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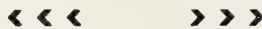
Presented before the Section on Dermatology, 118th Annual Meeting, Illinois State Medical Society, Chicago, May 22, 1958. Part of Panel on "Diagnosis and Treatment of Diseases of the Scalp".

covered by crusts. The surface of the nodules and abscesses is devoid of hair and the hairs between the lesions are removed easily. From small openings on the surface of the lesions, a serous or seropurulent fluid escapes to form crusts of varying characteristics. Comedo-like plugs or horny material are present in some follicular orifices which may be deeper, dilated, and plugged with keratin. Sometimes two or three may be seen to emerge from the same follicle. This is a notable feature of the disease. Healing results in scar formation, some of which are keloidal in nature. A fibrotic residue is a conspicuous feature. Should the disease remain unchecked, most of the scalp may become involved thereby producing great disfigurement.

KLOID ACNE
(*Dermatitis Papillaris Capillitii*)

This is a disease almost exclusively of males and is of a chronic inflammatory nature, involving the skin in the region of the nucha. It is characterized by folliculitis that produces nodules of a acneic, sycosiform, and keloidal type. It usually begins with formation of a few or

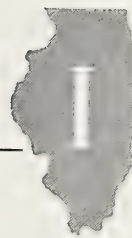
several rounded or acuminate, pinhead-sized nodules in the region of the nucha at the hair margin. The little tumors are reddish in color, of hard consistency, and bleed readily when incised. Sometimes they coalesce to form rough keloidal plaques. Pustules may arise between lesions or the entire group may become undermined and boggy, with circumscribed subcutaneous abscesses. Comedones of bizarre shapes may be present along with tufts of twisted, deformed, and broken hairs. Multiple hairs may be seen emerging from a single follicle (polytrichia) and jecting at many points through the nodules, the they usually are coarse and bristly. Hairs protendency of polytrichia, and ingrown hair formation are not infrequent findings and may have some important significance. Papillomatous vegetations sometimes form. The disease, though chronic, is likely to relapse in crops of pustules, papules, and nodules and may extend from the nucha to the vertex, avoiding the frontal and temporal regions. Sometimes the disease bears a marked resemblance to both acne and hydradenitis axillaris.



Co-operative research

The essence of Noah Webster's contribution to epidemiology is found in his own words, "As facts are the basis of human knowledge, it is of great importance to collect them. There are probably in every profession, facts enough which occur every year, in our extensive country, to constitute a mass of information, if collected, equal

to what a long life of experience would be necessary to acquire for any one man. If not collected, these useful facts are lost to all the profession, except to few individuals; if collected, they condense the knowledge of a whole life into the compass of a few hours' reading. This might be done every year, and what could be more useful?" *Herbert Thoms, M.D., Noah Webster—Epidemiologist. J.A.M.A. Nov. 29, 1958.*



Facial Actinomycosis Misdiagnosed as Tetanus

**JAMES GRAHAM, M.D., F.A.C.S., KENNETH MALMBERG, M.D.,
ROBERT PATEY, M.D., ALAN RUBENSTEIN, M.D., Springfield**

Trisismus has been observed frequently as a feature of actinomycosis when the disease occurs in or in proximity to the mandible.^{1,2} This brief report deals with a case in which the trismus was so marked following a crushing injury to a finger that a diagnosis of tetanus was made.

L. R., 33 year old white male machinist, was referred from his family physician to the surgical service of the Springfield Clinic on October 31, 1956, because for two weeks he had difficulty in opening his mouth. The jaw muscles stiffened gradually until he was barely able to open his mouth. Four and one-half weeks previously the patient had "mashed" his left index finger on a grinding wheel, for which he had been treated and given a "tetanus shot." About two weeks after the injury soreness in the mid-lumbar area of the back was felt when getting out of bed. This lasted about a week.

When examined, his canine teeth could not be opened more than three-eighths of an inch. There was tenderness over the left masseter muscle. The left index finger was swollen, red, and tender in the distal portion, similar to a complete paronychia. There was a subungual hematoma, and an old laceration along the medial side of the nail. X-ray examination of the mandible was normal.

The patient was hospitalized on November 1, 1956, at which time the finger nail of the left

index finger was removed, and the area debrided. Cultures taken from this area were negative for *Clostridium tetani*. Blood count, urinalysis, NPN, and blood sugar during hospitalization were normal. The patient was given 100,000 units of tetanus antitoxin and 1,200,000 units penicillin daily. By November 2, he was much improved, and was discharged on November 6, with much more motion of his jaw. He was afebrile during the hospital course.

Ten months later, August 4, 1957, the patient's jaw again became tight. Examination at this time revealed a localized enlargement palpable on the anterior, inner aspect of the left masseter muscle. This lesion was not tender. The patient was treated with ACTH and skeletal muscle relaxants for four weeks without improvement. The mass varied in size from time to time and could not always be felt. Dental consultation failed to confirm malocclusion, considered a possible diagnosis.

Because the patient failed to improve and because his canine teeth could not be separated more than one-half inch, he was again hospitalized. On September 16, 1957, the palpable mass was explored through an external approach. When the masseter muscle was reached, it was split in the direction of its fibers about three-eighths of an inch posterior to its anterior border. The mass was palpable beneath the heavy

medial fascia of the masseter muscle. This fascial layer was split in a vertical direction and a large encapsulated area of necrotic debris was encountered. This material was removed by curette. In the debris a three millimeter hard yellow mass resembling a sulfur granule was noted. Mycostatin® powder was instilled into the area, which was drained.

The pathologic report confirmed the suspicion of actinomycosis, as did culture of the material. Microscopic report is as follows: "Microscopic examination of the curettings reveals dense granulation tissue. Granulation tissue consists of heavy infiltrations with plasma cells, lymphocytes, and large numbers of macrophages filled with lipid characteristic of foam cells. Superficial portions of the granulation tissue are infiltrated with polys. The nodule submitted separately consists of several large sulfur granules consisting of masses of mycelial fragments surrounded by neutrophilic exudate. The findings are quite typical of an actinomycotic abscess."

The patient was treated in the hospital with Mycostatin 1,000 units daily, Chloromycetin 1,000 milligrams daily, 1,200,000 units daily of penicillin, as well as saturated solution potassium iodide. The patient had four days of morbidity postoperatively, with temperature as high as 102.4 degrees F. orally; then the temperature became flat and the course uneventful. The incision healed promptly without any subsequent drainage.

The patient was discharged from the hospital after one week and continued daily penicillin injections (1,200,000 units daily) until January 20, 1958. He has had no evidence of recurrent actinomycotic activity to this date (September, 1958).

DISCUSSION

The interesting feature of this case is its resemblance, due to coincidental features, to tetanus. In retrospect, we can say this was not the typical appearance of tetanus; but when faced with the combination of a crushing, infected wound of the finger associated with trismus, and no other apparent cause for trismus, tetanus is naturally considered as a probable diagnosis. It is also interesting that the actinomycotic lesion was masked by vigorous antibiotic therapy during the initial hospitalization, a point noted by other authors.³ The duration and the degree of disability suffered by this patient,

coupled with the relatively small size of the lesion which made its diagnosis difficult, re-emphasize the need for keeping actinomycosis in mind in obscure conditions around the cervical-facial area.

Actinomycosis appears to be increasing in frequency. Excellent reviews of cervical-facial actinomycosis have been written recently.^{1,2,3,4,5,6} Practically all the antibiotics have been used in the treatment of actinomycosis, usually with a high proportion of cases responding. Penicillin, chloramphenicol,⁷ oxytetracycline,⁸ tetracycline,⁹ chlortetracycline,¹⁰ the sulfonamides, and recently isoniazid^{11,12} have been successfully employed in treatment. The most widely used and apparently most universally effective drug in the treatment of this disease is penicillin, which should be used in massive doses for a long period, certainly for several weeks after apparent arrest of the disease. This is combined with surgical excision of infected tissue, drainage where indicated, and removal of diseased teeth if any are involved. The Johns Hopkins Hospital group¹³ advocates a combination of initial massive penicillin therapy, wide surgical excision of infected tissue, and long continued penicillin therapy in a dosage of 2 to 5 million units per day for 12 to 18 months after excision.

SUMMARY

A case is reported in which the clinical symptoms and signs resembled tetanus, but after one year's observation, the diagnosis of actinomycosis was substituted. The possibility of actinomycosis should be kept in mind in obscure conditions around the cervical-facial area, and in particular where any sort of a mass or infiltration is palpable. Treatment with penicillin or other antibiotic, combined with surgical excision, should be vigorous.

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A tribute to Squibb

In 1845, a young man of unswerving integrity and serious purpose, Edward Robinson Squibb was graduated, with high honors, from the Jefferson Medical College. Of Quaker parentage he was born in 1819 at Wilmington, Delaware, and died in Brooklyn in 1900. From his youth he dreamed of becoming a physician, and to make this possible he served five strenuous years as an apothecary's apprentice in Philadelphia, and out of his meager wages saved enough to pay for his medical education.

With the outbreak of the Mexican War, he became an assistant surgeon in the navy, serving first for two years on the Brig Perry in Mexican and South American waters, then cruising in the Mediterranean on the storeship Erie. Apparently, service in the navy did not appeal to him, but his daily experience taught him the untrustworthy nature of the drugs he and his colleagues were prescribing in their practice. The crude drugs then available, most of them imported, arrived in this country in bulk, contaminated with dirt and such other foreign matter as twigs, grass, and nails. There were no standards of potency; a given quantity of drug from one lot

might be equal in potency to half or twice as much as that from another. To Doctor Squibb this situation was deplorable, and not only deplorable — it was intolerable. It was the custom of the navy to purchase drugs as it purchased other supplies — from the lowest bidder, with few if any specifications as to quality. Squibb was distressingly aware that the medicines he prepared from these crude drugs were of indeterminate and many times of doubtful value.

He reported his opinions to the navy with, for a time, no effect whatever. Transferred to shore duty, he was assigned to the Brooklyn Navy Yard. In 1852 Congress appropriated limited funds for the establishment of a naval laboratory for drug research; in this, a small room above the morgue in the Naval Hospital, Squibb began his research with equipment of his own design, and some of his own construction. In these modest quarters he began the work which, through his indomitable courage and devotion, laid the foundation of what was to become in after years, the honorable house of Squibb. *Editorial. The Centenary of the Honorable House of Squibb. Rhode Island M.J.* June 1958.

Clinical-Surgical Conferences



Cholestasis

**Department of Surgery
Cook County Hospital**

Moderator:

ROBERT J. FREEARK, M.D.
Director, Surgical Education
Cook County Hospital

Discussants:

FRANCIS H. STRAUS, M.D., Clinical Professor of Surgery (Rush), University of Illinois College of Medicine and Attending Surgeon Presbyterian-Saint Luke's Hospital

R. BARRATT TERRY, M.D., Consultant in Medical Education, Cook County Hospital and Associate in Medicine, Northwestern University Medical School

PAUL B. SZANTO, M.D., Director, Department of Pathology, Cook County Hospital and Professor of Pathology, Chicago Medical School

HILDEGARD SCHORSCH, M.D., Department of Diagnostic Radiology, Cook County Hospital

Dr. Robert J. Freeark: The subject of today's conference is a not infrequent problem here at the County Hospital—jaundice, its differential diagnosis and treatment. To discuss an interesting case that was under the care of the surgical and medical departments about a year and a half ago we have two men who are exceptionally well qualified to participate. Dr. R. Barratt Terry is well known to many of you. He came to Cook County Hospital in 1952 as a research fellow in

medicine, bringing with him from England an extensive experience in the study of liver disease and associated problems. He has done as much to place the study of liver disease on a sound foundation at this hospital as any clinician I know. He is particularly well known for his introduction of a technique for performing liver biopsy which, in his hands, is an entirely safe and much sought after procedure.

Dr. Francis H. Straus recently stepped down from his position as one of our most esteemed surgical attending men, a position in which he served the patients and physicians of this hospital unflinching for the last 14 years. Actually he has been associated with our surgical department for 26 years, having served earlier as an associate attending surgeon. He is clinical professor of surgery (Rush) of the University of Illinois, is on the attending staff at Presbyterian-St. Luke's Hospital, and is current president of the Chicago Surgical Society. Of the many attending men who serve this hospital, Dr. Straus's opinion is one of the most highly regarded on problems of a medicosurgical nature.

CASE HISTORY

Dr. Eugene Broccolo (Senior surgical resident): This 47 year old nonwhite male fish handler was admitted to the medical service of Cook County Hospital on June 1, 1957 with a three

week history of yellow eyes, clay colored stools, and dark urine. He had been aware of severe itching throughout this period, and the onset had been associated with chilly sensations and fever that persisted for approximately three days. About two weeks before admission, he noted a rash over the anterior chest wall which rapidly became generalized and was associated with conjunctivitis.

The patient's general health had been good prior to his current complaints. He denied alcoholic excesses, drug ingestion, or recent injections. There was no history of abdominal pain or digestive disturbances, and his appetite remained good. There was a weight loss of 7 pounds in two weeks.

Physical examination revealed a well developed male, markedly icteric, and in moderate distress with pruritus. His blood pressure was 130/80 mm. Hg. pulse 60, and respirations 24 per minute. A generalized punctate eruption and numerous excoriations existed on the skin. Otherwise physical examination was unremarkable, except for the presence of a mass in the right upper quadrant that was variously interpreted as a distended gall bladder or liver edge four fingerbreadths below the costal margin.

Laboratory study revealed a hemoglobin of 83 per cent, white blood count 18,600, with 80 per cent polymorphonuclear neutrophils. Urine contained 4(+) bile and 2(+) urobilinogen on several occasions. Prothrombin time was 100 per cent. Stool benzidine was 2(+) on one occasion. Representative blood chemistries on admission and shortly before surgery were as follows:

	June 1, 1957	July 1, 1957
NPN	27	40
Fasting blood sugar	87	—
Total protein	6.3	6.2
Cholesterol	150	188
Alkaline phosphatase	7.7	15.0
Icterus index	80	90
Cephalin flocculation	1(+)	0
Gamma globulin	1.50	1.63
Thymol turbidity	2.7	3.2
Direct bilirubin	9.0	—
Indirect bilirubin	12.5	—

Dr. Freeark: I have asked Dr. Schorsch to review the patient's X-ray for us.

Dr. Hildegard Schorsch: The patient was admitted on June 1 and the roentgenogram of the chest shortly after admission shows the heart and lungs to be within normal limits. Study of

the abdomen at that time indicated that the liver shadow was enlarged. There is not always a correlation with what we see on the X-ray film and the extent of the enlargement that can be palpated, but I think here the liver is definitely enlarged. There were no abnormal opaque densities in the area of the biliary tract. The spleen was not evident and there was air in the large bowel of normal amount and distribution. Barium meal on June 20 disclosed no significant abnormalities and no splenic enlargement. The duodenal bulb was not completely filled on all views, but the second part of the duodenum showed a good mucosal pattern.

Dr. Freeark: How frequently are barium studies helpful in the differential diagnosis of jaundice?

Dr. Schorsch: I don't think a barium meal is too helpful in the jaundice problem. Secondary pressure defects on the duodenal bulb are common from the normal gall bladder, and I think these usually can be distinguished from pathologic distortions. In general I don't think you get too much help unless the cause of the jaundice is in the pancreas. Then we may have a wide sweep of the second part of the duodenum with disturbance in the mucosal pattern and, depending upon the size of the mass, secondary pressure defect on the stomach. The significance of these changes varies according to the type of stomach because with the so-called transverse stomach there is normally a wide curve and this may hide some pathology. There is no evidence of widening of the duodenal sweep in this case.

Dr. Freeark: Dr. Terry, this patient was initially admitted to the medical service and I'm wondering how you would handle him.

Dr. R. Barratt Terry: The subject today is cholestasis, and so perhaps we had better look at the liver profile to see whether it fits our subject. I think you will agree that it does. The flocculation tests, the total protein, and the prothrombin are all normal, and the alkaline phosphatase is elevated. We can go further and point out that while the icterus index increased from 80 to only 90, the alkaline phosphatase doubled from 7.7 to 15.0. This dissociation is characteristic of common duct stones. The usual answer in this type of case would be carcinoma of the pancreas or chronic pancreatitis, carcinoma of the Ampulla of Vater, or choledocholithiasis. But when the surgeon explores such a patient, he

Causes of cholestatic jaundice other than obstruction of the common bile duct.

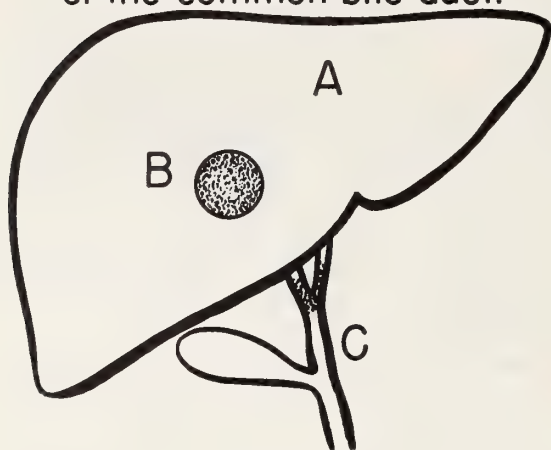


Figure 1.

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| A | { | <p>Toxic hepatitis (Thorazine, methyltestosterone)</p> <p>Cholangiolitic viral hepatitis</p> <p>Alcoholic fatty liver with jaundice</p> <p>Cholestatic jaundice with cirrhosis</p> <p>Xanthomatous biliary cirrhosis</p> |
| B | { | <p>Intrahepatic masses (neoplasm, gumma, hydatid, polycystic disease)</p> <p>Intrahepatic gallstones</p> <p>Ascaris lumbricoides</p> <p>Hepatic sarcoidosis</p> |
| C | { | <p>Bile duct carcinoma involving both ducts.</p> <p>? "Catarrhal" jaundice</p> |

not infrequently fails to find any such lesion. There are then various other problems to be considered and we will keep them mind while thinking about this case (see Figure 1) illustration made at the blackboard.

To return to our patient, let's review the clinical picture. The onset with chills and fever, severe pruritus, enlargement of the liver, typically obstructive liver profile, incomplete biliary obstruction as indicated by the 2(+) urobilinogenuria, and the high white blood count, all point strongly toward a stone in the common bile duct. But some aspects do not quite fit. Rash and conjunctivitis may occur in viral hepatitis, but a white blood count of 18,000 seems to rule out this diagnosis. These three findings plus his occupation certainly point to leptospirosis, but the total clinical picture and course are quite unlike that type of jaundice.

I wonder a little about the 2(+) urobilinogenuria. Ehrlich's test for urobilinogen is a wonderful clinical standby, but it is all too often incorrectly performed and examined. The commonest error is to fail to run a control by adding the Ehrlich's I and II reagents in the reverse order and then comparing the two tubes. Another helpful point is to view the two tubes end-on against a white light, permitting the detection of small but all important amounts of urobilinogen. Frequently, however, in obstructive jaundice we get a blackish-green reaction with Ehrlich's I, and in such cases I have never succeeded in demonstrating urobilinogen either by resorting to barium sulfate or by extracting the urobilinogen with chloroform.

There are many reasons for going astray in the diagnosis of jaundice. Even in the best hands and with the use of needle biopsy of the liver, transaminase estimations, and additional diagnostic aids, a residue of at least 5 per cent of cases are incorrectly diagnosed. In addition to the intrahepatic problems indicated in the illustration, (Figure 1) I would list the following as among the commonest reasons for error in diagnosis:

1. Prominent weight loss occurring in stone or hepatitis often is viewed erroneously as a sign of malignancy.
2. Hepatitis in older persons does occur.
3. Abdominal pain with hepatitis or cirrhosis is far more common than is generally supposed.
4. Discovery or history of unrelated neoplasm may have no relationship to the jaundice problem.
5. Absence of pain in choledocholithiasis: many stones are silent.
6. Splenomegaly in long standing jaundice does occur and often confounds the diagnostician.
7. Previous gall bladder surgery does not necessarily implicate gallstones or the surgeon.
8. History of alcoholism often is of no significance.
9. Unnoticed pallor—anemia is forgotten amongst the maze of liver studies.
10. Remitting jaundice in carcinoma of the pancreas I have seen several times.
11. Carcinoma of the liver with all of the manifestations of cirrhosis is a real fooler.
12. Failure to elicit history of hepatotoxic drugs.
13. Mechanical obstructive jaundice occurring

in patients taking Thorazine or methyltestosterone.

14. Cholangiolitic viral hepatitis is a difficult and often impossible clinical diagnosis.

Thus we are liable to be faced with the problem of what to do. The usual answer has to be a laparotomy, for we cannot afford to let the patient continue with obstruction of the common bile duct. The danger of damaging the liver with the stress of surgery and anesthesia is not too great, for the type of hepatitis that mimics obstructive jaundice is the very type in which there is minimal damage to the hepatic cells (which is another reason why needle biopsy of the liver in such cases is so difficult to interpret). I think the problem is not so much whether to explore as when. My feeling is that there is no hurry in the absence of fever, but that you should not wait more than six weeks. It is reassuring to remember that many cases of cholestatic hepatitis do well following prolonged drainage of the biliary tree and this may constitute definitive therapy.

Dr. Freeark: I take it you would not care to go out on a limb about which situation occurred here.

Dr. Terry: Reading through this protocol objectively, I thought it was a stone in the common bile duct.

Dr. Freeark: That opinion prevailed on the surgical ward, while on the medical ward some of the other possibilities you mentioned were considered. It was felt that the solution to the problem would be a closed percutaneous needle biopsy of the liver and, if I remember your teachings correctly, this is not always a harmless procedure, especially in the patient suspected of obstructive jaundice. Would you do needle biopsy or wait six weeks and explore?

Dr. Terry: I would explore.

Dr. Freeark: There is a prevailing opinion that an elevated alkaline phosphatase magically identifies the presence of surgically correctible obstructive jaundice.

Dr. Terry: It would help if you were betting on a large number of cases, for an alkaline phosphatase above 15 Bodansky units certainly is more common in obstructive than in nonobstructive jaundice. But there are so many exceptions in both directions it is dangerous to rely upon this test alone in the individual case. In many

cases of cirrhosis it goes up and in a large number of cases of carcinoma of the pancreas we have seen normal or near normal levels. But if you take a combination of a high alkaline phosphatase, normal liver function tests, normal transaminase, normal mucoproteins, then you have a heavy surmise against parenchymatous jaundice.

Dr. Freeark: How long would you wait with the biochemical findings that confront you here and a strong suspicion that this was not a surgical problem.

Dr. Terry: Other things being equal, six weeks is the time at which parenchymatous damage is no longer acutely active and we should not wait longer. If there is fever this suggests active cholangitis, and indicates earlier intervention.

Dr. Straus: I should like to ask if you would wait less than six weeks if you had a white count like the 18,000 this patient demonstrated. Is this not evidence of bile duct infection as opposed to liver cell disease?

Dr. Terry: Yes, this is a strong point against hepatitis.

Dr. Freeark: This patient was taken to surgery July 6, 1957 six weeks after admission. Dr. Straus, would you agree with that course of action and what would you think we found?

Dr. Francis H. Straus: There is little doubt, on the basis of what Dr. Terry has pointed out, that this is jaundice due to a lesion somewhere between the hepatic cell and the duodenum. It is more difficult to say where in the bile tract from the cholangioles to the papilla of Vater this obstruction is. It is least common in the smallest bile radicles. It is more common as the result of silent stone or neoplasm so, on a statistical basis, I would agree that this is probably jaundice due to obstruction far distal to the hepatic cell. Most of those are surgical jaundice in that relief of the obstruction by surgery will make a marked difference in the patient.

There are several things to consider here. Dr. Freeark made the mistake of escorting the patient to the conference on the same elevator with me. I know he is reasonably well because he is up, clothed in street clothes, and walking around. This speaks well for his treatment and makes carcinomatous obstruction unlikely. The onset of his illness was chills and fever followed by jaundice. Shortly afterwards he had pruritus, rash,

and conjunctivitis. That triad is characteristic of leptospirosis infection, and I might have suggested that diagnosis here if I had not seen the patient today and that changed my mind. Dr. Freeark said his liver is still large, and that does not fit Weil's disease. It may still be that, and I would like to ask if blood agglutination titers were made?

Dr. Freeark: Yes, and the diagnosis of Weil's disease was excluded.

Dr. Straus: Because his liver still is large this means that the surgery, although adequately performed, was not successful in removing a stone or that the obstruction was above the hilus of the liver. The fact that he is not now still jaundiced is strong evidence that he did not have neoplastic obstruction in a major duct, and probably we will have to put it close to the liver cell but on the duodenal side, and that would mean it is cholangiolitic in origin.

One further point should be mentioned and that is the type of obstruction we saw in the 30's when the sulfonamides first came in, and we put 15 gm. of sulfanilamide into the abdomen in peritonitis and the patient was jaundiced for a few days afterward. That could have been hepatic cell injury or cholangiolitis or both. Sulfanilamide is rarely used now. Much more recently we have encountered a similar condition following the use of chlorpromazine therapy in some patients.

Dr. Freeark: The possibility of chlorpromazine administration was investigated and no such drugs had been given to the patient. He was explored with a diagnosis of silent stone or ampullary carcinoma. On exploration the mass in the right upper quadrant was liver and it was large and had a nutmeg appearance. It showed no gross evidence of fibrosis. The gall bladder was partially collapsed, thin walled, and free of stones. The common duct was normal in size, and the pancreas was palpable and visibly unremarkable. The common bile duct was aspirated with a needle and was found to contain clear bile.

Our impression was that we did not have a gallstone problem since the gall bladder was non-calculous and appeared normal. We felt now that the cholestatic condition was in the liver and surgical relief unlikely. Dr. Straus, where does the surgeon go from here? Should he call it a day?

Dr. Straus: The surgeon went in first with the

idea of proving or disproving that there was an obstructive lesion in the bile tract that he could correct. He found none on careful exploration and this means that the obstructive lesion must have been proximal to the hilus of the liver, so he at least established a negative diagnosis. We know that if there is an inflammatory lesion of the smaller bile radicles, and if you can remove even the normal distal resistance to bile flow by prolonged drainage of the bile tract, we can say in theory it is a desirable thing. Here you feel there is a normal extrahepatic bile tract but the surgeon should go further and prove this radiologically because even the best surgeon can miss stones. If, on X-ray study, there is no evidence of obstruction, and a normal biliary tree is visualized, I would insert a tube in the common duct and plan on prolonged biliary drainage. To satisfy everyone I would take a liver biopsy.

A question that has not been decided is whether, with no evidence of infection in the extrahepatic bile duct, the gall bladder should be left behind when the common duct is drained. Most surgeons feel a normal gall bladder should not be disturbed. But when I was younger I worked on the service of Dr. Evarts Graham who demonstrated that there is a low grade cholecystitis that does not look too dangerous, but reflects the presence of inflammatory cells in the smaller biliary radicles. He did a cholecystectomy while cholangiolitic infection was present. I do not agree with that. I remember working in the earlier years when physicians considered the possibility of ascending infection to the biliary system and they used words like angiolas to describe what we now call cholangiolitis. Really the etiology of cholangiolitic jaundice is not known positively. Bacteriologically, the ducts usually are sterile, but relief of external pressure and the use of antibiotics are justified many times. It is fashionable in some circles to say that this is a disease of the small biliary radicles and that any such disease can be well controlled on steroid therapy. There is some investigation of the use of steroids in this condition in combination with long biliary drainage.

Dr. Freeark: At the time of surgery we did not have X-ray control available but the common bile duct was explored and showed no evidence of intraductal obstruction, the probe passing readily into the duodenum as well into as the proximal liver ducts. We inserted a short arm T

tube and took an open liver biopsy that we sent to Dr. Szanto. Dr. Szanto has kindly consented to review these slides with us today. He represents one of the outstanding authorities in both pathologic and clinical circles on this type of problem.

Dr. Paul B. Szanto: May I state that the little experience that I have acquired on the subject under discussion is due to the fact that I have been associated for many years with Dr. Hans Popper. I had the opportunity, therefore, to study not only our large material but also the liver biopsies sent him for consultation.

Before discussing this specific case, may I make certain general remarks? Whenever we examine sections prepared from a liver biopsy specimen, without any knowledge of the clinical data, we have to answer certain questions in a definite sequence. The first question to be answered is: Is the architecture preserved or distorted by a process of reconstruction? In other words, are we dealing with a cirrhotic or non-cirrhotic liver? If reconstruction is present, this means cirrhosis. Secondly, in the sections, is there any morphologic evidence of jaundice? If reconstruction is absent but bile casts are present—i.e. jaundice exists—then the next question would be: Are we dealing with hepatitis or with an obstructive jaundice? Finally, if on the basis of the histologic examination, hepatitis can be ruled out and obstructive jaundice is diagnosed, then the last question is: Are we dealing with an intrahepatic or an extrahepatic obstruction? The morphological differential diagnosis between intrahepatic and extrahepatic cholestasis or obstruction is a difficult problem. The following morphologic features may be found in a typical case of extrahepatic biliary obstruction of long duration: (1) extravasation of bile from the interlobular bile ducts; (2) so-called bile infarcts—i.e. the group of hepatic cells adjacent to the portal fields have a reticulated cytoplasm and poor nuclear staining, and (3) dilatation and proliferation of the septal ducts that contain bulky bile concretions. However, these typical morphological signs of extrahepatic biliary obstruction are not always present and their absence does not rule out the possibility of extrahepatic biliary obstruction.

In the case under discussion, we received two liver biopsy specimens. The section prepared from the first specimen taken at surgery revealed

preservation of the normal lobular pattern, although the portal fields were enlarged and moderately cellular due to infiltration by lymphocytes and a few polymorphonuclear leucocytes. Bile casts were scattered throughout the liver lobules, and a bile cast was seen in one of the proliferating cholangioles. There was some variation in the size of the nuclei of the hepatic cells, but the liver cell damage was not too severe. The Kupffer cells were prominent.

In summary, we are dealing in this case with definite evidence of cholestasis. In the absence of definite evidence of severe liver cell damage, spotty necrosis, or Councilman bodies, we cannot make a diagnosis of viral hepatitis. Therefore, the diagnosis would be cholestasis due to obstruction. But, are we dealing with an intra- or extrahepatic obstruction, and such an intrahepatic obstruction is known also by the term "cholangiolitis". Despite extensive studies, the morphologic basis of intrahepatic cholestasis or cholangiolitis still is unknown. It is assumed that it starts with increased permeability of the bile ductules (cholangioles), resulting in bile regurgitation, inflammatory reaction, and inspissation of bile in the ductules.

What is the etiology of this so-called cholangiolitis? First, in some cases of viral hepatitis, the liver cell damage is very much in the background, but possibly the damage of the ductules due to the virus may lead to the morphologic and clinical picture of a cholangiolitis (cholangiolitic viral hepatitis). Secondly, various drugs (methyltestosterone, chlorpromazine, etc.) may lead to the same morphologic and clinical picture. Thirdly, the etiology of this condition occasionally cannot be elucidated at all.

Coming back to our case, as I mentioned before, our first diagnosis was cholestasis due to obstruction. However, since the liver cell damage was not sufficiently severe for a viral hepatitis but still was more than seen in an uncomplicated early extrahepatic obstruction, our final diagnosis was (without having knowledge of the clinical history) intrahepatic obstructive jaundice, possibly of viral etiology.

Sections prepared from the second biopsy specimen, obtained six months later, revealed preservation of the architecture, although the lobular pattern was somewhat obscured due to marked enlargement of the portal fields. The liver cell

damage was more pronounced than in the first biopsy specimen, and we could find a few bile casts, although the patient was not severely jaundiced at the time the second biopsy was taken. There was a marked Kupffer cell proliferation, and minimal interlobular foci of necrosis also were seen. The morphologic diagnosis of this second biopsy specimen would have been chronic hepatitis, probably of viral etiology, if we knew nothing about the case. However, knowing the first biopsy findings, the diagnosis is chronic cholangiolitic hepatitis. The findings in the second biopsy specimen support the original evaluation of the case—namely, intrahepatic obstruction of viral etiology.

Dr. Freeark: At the time the second biopsy specimen was taken the patient was readmitted because he remained jaundiced and itching had persisted. We had removed the T tube after three weeks of drainage, and now regret this decision. I would like to point out that on the first post-operative day, in the face of an icterus index of 100, he put out 720 cc. of bile through the T tube. Over the next two weeks the bile output was considerable, his icterus decreased, and he tolerated clamping of the tube without trouble. Dr. Schorsch, will you show us the cholangiogram you obtained? This was taken 10 days after surgery and although we felt that the exploration of the common duct had fairly well excluded major bile duct obstruction we were anxious to confirm this radiographically.

Dr. Schorsch: The gall bladder was apparently spared and is seen to be small and readily filled by way of the common duct T tube. The ducts are smooth in contour and no irregularities are seen. The common duct is not dilated, and dye passed into the duodenum so you have to call this a normal cholangiogram. It is reported in the literature that in acute hepatitis an abnormal and often characteristic cholangiogram is obtained but in this case, it was two weeks after surgical drainage and certainly shows no significant abnormalities. If it had been done during surgery I would imagine it might have shown irregularities in the contour of the smaller ducts because of inflammation.

Dr. Straus: I think the true value of this cholangiogram is to rule out obstruction in the proximal extrahepatic biliary tree.

Dr. Freeark: How long should we have left the T tube in?

Dr. Straus: This is purely by instinct but I would have left it in as long as there was clinical jaundice.

Dr. Terry: Would you consider doing a cholecystoenterostomy as a means of prolonged biliary decompression?

Dr. Straus: I can see no reason for doing cholecystoenterostomy. The procedure might relieve pressure but you have accomplished that more effectively with a tube in the common duct.

Dr. Terry: It is a messy business to have a T tube stuck in for nine months, and besides all that bile is lost to the patient. I would be inclined to favor a cholecystoenterostomy with internal rather than external biliary drainage if you think it plausible.

Dr. Straus: I think the gain from the procedure would be theoretical and I would not want to do it for a theoretical gain.

Dr. Freeark: It is difficult to understand the effectiveness of prolonged T tube drainage in cases such as these. A T tube obviously contributes a great deal in the patient with an obstructed common duct but why common duct drainage in the absence of obstruction is therapeutic is not as easy to comprehend. It is said to relieve pruritus and the short while we left the tube in place seemed to help greatly. The man had been jaundiced to some extent for the past year and a half and although it is barely detectable at present I am tempted to side with Dr. Terry on the virtues of internal drainage if you think a cholecystojejunostomy would stay open in the absence of obstruction in the bile ducts.

Dr. Terry: Some people believe that a weakened liver is unable to secrete or excrete bile against the normal intraductal pressure. If you can relieve this pressure by T tube or internal anastomosis you will get rid of jaundice and pruritus but it will have little effect on the overall process.

Question: What percentage of viral hepatitis gives a normal liver profile?

Dr. Terry: About 10 per cent. In cirrhosis without jaundice the figure is about 70 or 80 per cent with normal liver profile, and with jaundice about 30 per cent will have an otherwise normal liver profile.

By the way, there is something very funny, or even fishy, about this case. He has a white

count of over 18,000 and how this fits in with a viral hepatitis I don't know.

Dr. Frank Folk: (associate attending surgeon) What about the role of steroids?

Dr. Terry: They have been used in differential diagnosis but not with great success. If you have a stone or active infection and you give the patient steroids, you may damage the liver irreversibly. In cholangiolitic hepatitis, steroids may clear up the picture rapidly and get rid of the jaundice quickly but it will not help in obstruction lower down. In a case like this, I would be tempted to use them, however, after first establishing the diagnosis.

Dr. Straus: You have no severe extrahepatic obstruction or infection here.

Dr. Terry: Therapeutically, it would be indicated.

Dr. Freeark: He had a course of steroids six months after surgery and like so many other

problems treated with steroids, there was difficulty in interpreting whether he had benefited or not.

Dr. Broccolo: Would you recommend a drainage procedure for a patient with intrahepatic obstruction if you knew the diagnosis ahead of time?

Dr. Terry: Yes, provided jaundice had not relented after three months. This is advocated in Thorazine® hepatitis, for example. Sometimes you are surprised. Four years ago we had a 21 year old girl with painless jaundice following six months of Thorazine. She was finally explored and found to have a large common duct stone. That is another reason for exploring.

Dr. Freeark: Then we may consider these, Thorazine jaundice cases as surgical problems?

Dr. Terry: Yes, particularly if you do a cholecystoenterostomy.



The criterion of a great physician

Maimonides was a great doctor because he was a great man, because he was essentially a religious man. For behind each degree of doctor there stands the man and no one can be called a great doctor unless he is basically an honest man, and unless he is basically a religious man who remembers every moment of his life that

human life is sacred, and that the life intrusted to him was created in the image of God. A great doctor is one who considers himself only a messenger, through whom God will grant the cure. No one who does not have these concepts can be called a great doctor, no matter how well trained he may be. *Samuel J. Zakon, M.D. Maimonides: Quart. Bull. Northwestern Univ. Med. School. Spring 1959.*



Anticancer compounds in the treatment of malignant disease

The discovery by Goodman, Gilman, and associates 15 years ago that nitrogen mustard would cause regression of cancer, introduced a new therapeutic agent with tremendous potentiality. Up to that time, surgery and irradiation (X-ray, radium, betatron) were the only two methods available to cure cancer. Will chemotherapy displace surgery and irradiation or add another curative agent to the two already available?

When nitrogen mustard was found to have only a limited anticancer effect, researchers were stimulated to look for more effective compounds. Actually, chemists throughout the world have worked tirelessly in this field, and thousands of new chemicals have been submitted for trial. This flurry of chemical endeavor has resulted in the submission of more than 25,000 new chemicals annually for preliminary screening. Several different types of chemicals have been tested; perhaps the largest group consists of alkylating agents, many of which are derivatives or analogues of nitrogen mustard.

Although numerous drugs will produce temporary regression of a tumor now and then, none of them is curative. The exception may be Methotrexate® provided the prolonged regression observed after the use of this product in a group of choriocarcinoma cases remains permanent. In this series — being studied by Hertz and asso-

ciates — four or five cases have had prolonged regressions. The next best results from anticancer agents have been obtained in leukemia, in which regression up to two years has been obtained by Farber and associates and others.

Four or five years ago we developed the concept that even though anticancer drugs would not cure advanced cancer these agents might kill loose cells dislodged at the time of operation, or cells recently lodged as microscopic metastases. Our experiments on animals at that time showed that nitrogen mustard and thioTEPA were effective in reducing sharply the "take" of Walker 256 carcinosarcoma cells injected intraportally in rats when the drugs were injected within a minute after inoculation of the cells. If treatment was delayed several hours the effect diminished sharply, as one would expect. This phenomenon has now been confirmed by several workers.

When we discovered that anticancer drugs would prevent "takes" following inoculation of cells in animals, we began its use in human beings. After some preliminary testing, we initiated our official program in March 1956. A control patient was paired with each treated patient, utilizing random sequence in blocks of two. We started our therapy in patients with carcinoma of the breast, stomach, colon, or rectum because these tumors disseminate extensively, especially by the vascular mechanism. We gave 0.4 mg. nitrogen mustard per kilo (maximum of 30 mg.)

in 3 doses (extending over a period of 3 days) beginning at the end of the operation before the patient left the operating room. The course was repeated every four months for 5 or 6 doses if the white blood cell count was over 5,000.

We joined the Adjuvant Series (recently formed nationally) with our patients having carcinoma of the stomach and lung. We* have just recently reviewed our cases, consisting of 74 patients with cancer of the breast and 62 with cancer of the rectum and colon. There have been slightly more than twice as many recurrences in the control group of breast cancers as in the treated series (12 to 5). The death rate has been even more in favor of the therapy group (6 to 1). These results, though favorable, do not justify routine use as yet of nitrogen mustard as outlined because the series is small, and the observation time short. We should like to reserve judgment until the results have been duplicated by some other team.

In the palliative treatment of cancer it is well known that certain patients with breast cancer will respond to a certain chemical (e.g. thio-TEPA) whereas others will not. Also, we know that certain tumors will respond to one chemical but not to another. We are convinced this will be true also of our prophylactic and adjuvant series. This uncertainty emphasizes the great need for a method of assay of tumors against several chemicals so that we can use the most effective one. There is just as much reason to do this assay with tumors as with antibodies and bacteria. In fact, there is more need since failure to use the right drug may result in early death of the patient. We predict that so long as we are using chemical compounds with limited value we will be relying upon some type of assay in the very near future. In view of this important need, we have begun studies of this type in our tissue culture laboratory under the supervision of Dr. G. O. McDonald.

During the past four or five years there have been sporadic reports (Friend, Schwartz, and others) indicating that many types of malignant tumors are antigenic, making it possible to develop antibodies against them. We have had some

preliminary favorable results along these lines in our laboratory and look favorably upon this mechanism of therapy as one with great possibilities. Innumerable mechanisms of making antibodies and vaccines are possible. It will no doubt take years to develop effective mechanisms in this line of therapy, but in our opinion, the plan is worthy of tremendous energy and endeavor.

Another mechanism consisting of the use of more than one therapeutic modality deserves serious consideration. We are learning through the experience of Farber, Rhoads, and others that the use of two drugs (e.g. 6 mercaptopurine and asazirine) simultaneously in certain patients with leukemia will obtain a more significant regression than can be obtained from one chemical alone. Combinations of therapy are so numerous it is staggering to contemplate how many of them should be tried. However, until the day arrives when a magic bullet against cancer is available we will have to utilize methods of assay, and combinations of therapy to obtain maximum effect.

Progress made during the past few years makes it obvious that when a truly effective agent is discovered, it will apply only to one type of cancer. As time passes, other effective agents for other types of cancer will be discovered. It will be a long, long time before we see the day when one agent will cure all cancers. Nevertheless, we must continue with extensive efforts in various phases of research, with the hope that some day someone will discover such an agent. Meanwhile, it is gratifying to see how much progress has been made during the past five years. The future is bright for the development of effective agents even though they may not be classified as the answer to our most fervent wishes.

Warren H. Cole, M.D.

Medical schools no longer attract the better students

Students are a basic and an integral part of the educational program for medicine. Their qualities and abilities help mold to a considerable extent the nature of the program and the physicians it produces. If we do not attract into medicine an adequate number of students capable of acquiring and using our increasingly broader and deeper understanding of basic biology and the behavioral sciences in the care of patients, our

*Mrzek, Rudolph G.; Economou, Steven G.; McDonald, Gerald O.; Slaughter, Danely P.; and Cole, Warren H.: Prophylactic and Adjuvant Therapy with Anticancer Agents at the Time of Operation. Presented April 17, 1959, at the annual meeting of the American Surgical Association, San Francisco, California.

educational program must of necessity lower its goals to fit the students available.

Far too little attention has been paid to the quality and size of the pool of applicants from which the medical schools choose their classes. Too much stock has been placed in predictions that swelling college enrollments would raise the number and quality of applicants. These predictions depend upon a constant fraction of the students' seeking medicine as a career; but the fraction has been falling since the turn of the century. It is apparent that predictions made as recently as 1955 of the future number of applicants to medical schools are in error; they were overly optimistic and the applicant pool actually was smaller for the 1958 than for the 1957 class despite more college graduates.

The decreasing number of candidates has not been associated with an improvement in quality. There is good objective evidence of a decline in the quality of applicants and in turn, of students accepted to medical schools. As recently as 1950, 40 per cent of enrolled medical students had premedical grade point averages of A, an equal number had B averages, and about one-fifth entered with C averages. For the class entering in 1955 only 16 per cent had A averages, 71 per cent had B averages, and the remainder had C averages. There was little change in this distribution for the 1956 class which, it was predicted, would be of better quality because of a rise in the number of applicants.

These figures represent averages for the country and there is considerable variation among individual medical schools. Some are blessed with student bodies in which 70 per cent have A averages in their premedical preparation. Others, with severe geographic limitations for the students which they can accept, are not similarly endowed and in some, 70 per cent of the students enter with C averages. Although grades do not establish suitability for the study of medicine or subsequent practice as a physician, they certainly are one of the guideposts.

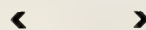
The poorer quality of students is reflected to some degree in the drop-out rate of first year medical students which was 5.5 per cent in the 1954-55 class and 7.8 per cent in the 1957-58 class. Essentially, these students failed or withdrew in poor academic standing. The increase in attrition represents the additional loss of 211 students from the 1957-58 class. This is equiva-

lent to two average size medical school entering classes. The magnitude of the economic loss associated with increasing student failures can be judged by the funds that would be necessary to establish and operate two new medical schools. A capital investment of \$70 to \$100 million dollars would be needed for the facilities and an annual operating budget in excess of \$3 million. At a time when there is little disagreement about the need for additional physicians in our growing population these mounting losses assume even greater significance because they oppose attempts to augment the numbers of medical school graduates.

The decrease in number and quality of applicants to the medical schools can be explained in part by the rising competition from other professions for the top ranking students. Medicine no longer occupies a unique position as a profession it held in the past, shared only with law and the ministry. Today the physical, biological, and behavioral sciences offer broader professional opportunities with prestige, intellectual satisfactions, and financial rewards comparable to those in medicine. The inordinate length and cost of the total educational program for medicine, measured not only in the monetary outlay, but also in the years of income it denies, is having its influences on career choices. The educational programs in the other professions are shorter than for medicine and large sums of money are available for fellowships and research assistantships that almost guarantee the total expenses of graduate education for all but a small group of students in the physical, biological, and behavioral sciences. Medicine has no equivalent source of subsidy for its students.

Possible solutions to the problems confronting medicine in attracting qualified students are apparent: active recruitment programs in high schools and colleges; well considered plans for shortening the over-all program; increased scholarship aid to medical students; and higher economic and professional status for physicians in specialty training.

John A. D. Cooper, M.D.



A man should inure himself to voluntary labor, and not give up to indulgence and pleasure, as they beget no good constitution of body nor knowledge of mind.
—Socrates

Plan for hospital needs

One of the greatest problems created by the rapid expansion of a metropolitan area is the shortage of hospital facilities. Chicago is meeting the challenge through the creation of a new corporation called "Hospital Planning Council for Metropolitan Chicago."

According to Dr. V. M. Hoge, executive director and formerly the assistant surgeon general of the United States, the objectives of the new corporation are as follows:

1. To plan the efficient and economical development of hospitals and other facilities for care of the sick, serving the metropolitan Chicago area in accordance with measured needs for these services and the available resources; and to review and make recommendations regarding all proposals of individual hospitals and related facilities for major capital expenditures.

2. To co-ordinate the services of the hospitals in the metropolitan area and to bring about a closer interrelation of hospitals with other facilities for care of the sick and with the public health and welfare agencies of the community.

3. To study, develop, and make recommendations concerning standards and methods to improve the services and financial economy of hospitals and related facilities for care of the sick in the metropolitan area.

4. To provide a means of correlating the interests of hospitals and the medical profession, on a community-wide basis.

5. To advise the public of the metropolitan area and the co-operative fund raising agencies, concerning the financial needs of hospitals and related facilities, both for capital and operating purposes.

6. To make known to the citizens of the community the services available for the care of the sick, and increase their knowledge and understanding of such services.

There are close to 4 million residents in Chicago and there should be 18,000 general hospital beds, according to ratios set up by state and federal government authorities. The grand total of beds now lacking is 5,691. If Chicago's population continues to grow at its present rate, we will be short 8,000 beds by 1960.

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The most difficult thing in life is to know yourself.

—*Thales*

Enzyme inhibitor

Basic research that began 40 years ago led to the discovery of chlorothiazide (Diuril®). The story was told by Robert Berliner, research director of the National Heart Institute, at a cardiac symposium last winter.

The original research stemmed from the way carbon dioxide is eliminated from the body. The blood is able to carry carbon dioxide, a gas, to the lungs because carbon dioxide reacts with water to produce carbonic acid. The latter is carried to the blood vessels of the lung where it is converted back to gas and excreted during exhalation.

But the conversion rate in the laboratory was found to be slow and the question arose as to how the conversion was stepped up in the lungs. The circulation through the lungs is rapid and the blood must give up its carbon dioxide within a few seconds. Basic research uncovered the enzyme, carbonic anhydrase, in the blood, which speeds up the reaction. This substance was isolated from other tissues but the nature of its function in these tissues was not clear.

The story skips 20 years when sulfanilamide was introduced. Many patients treated with the drug developed acidosis. Basic research workers found that sulfanilamide has a blocking action on the substance (carbonic anhydrase) that speeded up the elimination of carbon dioxide. Further studies on the mechanisms of urine formation showed that acidosis occurred when carbonic anhydrase was inhibited. In addition, considerable sodium was lost in the urine. This suggested that sulfanilamide might be effective in treating heart failure, but the side effects were too numerous. This led to the synthesis and trial of a number of carbonic anhydrase inhibitors. Diamox® was the first one to be found. Chlorothiazide was next. We now have hydrochlorothiazide which is said to have 10 to 20 times the potency of the original drug.

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Blue Shield shows further growth in last year

Continued growth of the Illinois Medical Service (Blue Shield) was shown in the report for 1958.

As of December 31, 1958, Blue Shield had 1,975,229 members, an increase of 203,898 for

the year. Since then, the total has passed the 2,000,000 mark, a substantial evidence of the need and desire of the public for a plan that helps pay for necessary medical attention when it is needed.

Benefits paid and provided for, to help pay for physicians' services, amounted to \$17,788,452 in 1958, compared to \$14,795,188 in 1957. Approximately 410,000 physicians' reports of

services rendered were processed last year.

Assets as of December 31, 1958, amounted to \$13,352,459, an increase of \$1,434,624 for the year. Reserves for future medical care increased \$185,047 to a total of \$7,842,448.

During 1958, Blue Shield conducted its third nongroup enrollment for self-employed people and persons otherwise unable to enroll through a group. About 72,000 people took advantage of the offer.



May we suggest
that you read through
the following program?
You are certain to find
talks and exhibits
which will warrant your
attending YOUR
Annual Meeting one or
more days.

PROGRAM
for the
One Hundred Nineteenth
ANNUAL MEETING
of the
ILLINOIS STATE MEDICAL SOCIETY



May 19, 20, 21, 22, 1959

Hotel Sherman

Chicago

PROGRAM SUMMARY

MONDAY, MAY 18

p.m.

7:30 Credentials Committee

8:30 First meeting of the HOUSE OF DELEGATES, Louis XVI Room

TUESDAY, MAY 19

9:00 Section on Obstetrics & Gynecology, Crystal Room

9:00 Section on Cardiovascular Disease, Old Chicago Room No. 101

9:00 Section on Eye, Ear, Nose and Throat, Ruby Room No. 113

10:00 REFERENCE COMMITTEES

10:00 Reports of Officers and Councilors, Gold Coast Room No. 111

10:00 Reports of Standing Committees, Orchid Room No. 106

10:00 Reports of Council Committees No. 1, Jade Room No. 103

10:00 Reports of Council Committees No. 2, Polo Room No. 102

10:00 Reports of Council Committees No. 3, Holiday Room No. 105

10:00 Reports of Council Committees No. 4, Life Room No. 108

10:00 Miscellaneous Business, Time Room No. 110

12:00 Fifty Year Club Luncheon, Assembly Room

1:30 General Assembly, The Ballroom

3:30 Section on Radiology, The Crystal Room

3:30 Section on Anesthesiology, Old Chicago Room No. 101

6:30 Public Relations Dinner, G.B. Shaw Room

WEDNESDAY, MAY 20

8:00 Women Physicians' Breakfast, Orchid Room No. 106

9:00 Section on Pediatrics, Louis XVI Room

9:00 Section on Surgery, Crystal Room

9:00 Section on Eye, Ear, Nose and Throat, Ruby Room No. 113

9:00 Illinois Chapter, American College of Chest Physicians, Assembly Room

9:00 Physicians' Association, Department of Public Welfare, Gold Room No. 114

10:30 Reference Committee meetings as needed

11:45 Illinois Academy of General Practice Luncheon, Old Chicago Room No. 101

12:00 Illinois Chapter, American Academy of Pediatrics — Luncheon, Louis XVI Room

12:00 Illinois Chapter, American College of Chest Physicians — Luncheon, Assembly Room

1:30 General Assembly, The Ballroom

7:00 The Annual Dinner, The Ballroom

THURSDAY, MAY 21

9:00 Second meeting HOUSE OF DELEGATES, Louis XVI Room

9:00 Section on Dermatology, Old Chicago Room No. 101

9:00 Section on Preventive Medicine & Public Health, Assembly Room

9:00 Section on Medicine, Crystal Room

9:00 Section on Allergy, Gold Room No. 114

12:00 Section on Dermatology — Luncheon, Old Chicago Room No. 101

12:00 Section on Preventive Medicine & Public Health — Luncheon, Assembly Room (with other groups as listed on program)

12:00 Section on Medicine—Luncheon, Jade Room No. 103

12:00 Section on Allergy — Luncheon, Ruby Room No. 113

12:00 Phi Chi Luncheon, Life Room No. 108

1:30 General Assembly, The Ballroom

6:30 Loyola Alumni Banquet, Crystal Room

FRIDAY, MAY 22

8:30 Third meeting HOUSE OF DELEGATES, Louis XVI Room

9:00 Section on Pathology, The Crystal Room

9:00 American College of Surgeons, Symposium on Trauma, Assembly Room

12:00 Section on Pathology — Luncheon, Old Chicago Room No. 101

2:00 Illinois Association of Blood Banks, Crystal Room

HOUSE OF DELEGATES

Louis XVI Room — 1st Floor

(1) MONDAY, MAY 18

8:30 p.m. The first meeting of the House of Delegates will be called to order by the president, Raleigh C. Oldfield, for:

The reports of officers, councilors, committees, etc., and supplementary reports where indicated;

The introduction of resolutions, and the transaction of any other business which may come before the House.

THE COMMITTEE ON CREDENTIALS will meet at 7:30 p.m. Monday evening, May 18, in the entrance way to the Louis XVI Room. Delegates desiring to be certified as the official representatives of their county medical societies must present their CREDENTIAL CARDS to this committee.

(2) THURSDAY, MAY 21

9:00 a.m. The second meeting of the House of

Delegates will be called to order by the president to hear those reports of reference committees ready to be presented.

(3) FRIDAY, MAY 22

8:30 a.m. The third (and last) meeting of the House of Delegates will be called to order by the president to hear the remaining reports of reference committees;

For the election of officers, councilors, committee members, delegates and alternate delegates to the American Medical Association, and

For the transaction of any other business to come before the House.

At the close of this last meeting, Joseph T. O'Neill will be installed as the new president of the Illinois State Medical Society, and will receive the official gavel from the retiring president, Raleigh C. Oldfield.

PROGRAMS FOR TUESDAY, MAY 19, 1959

SECTION ON CARDIOVASCULAR DISEASE

Chairman . . Edward W. Cannady, East St. Louis
Secretary Ernest G. McEwen, Evanston

Tuesday Morning, May 19, 1959
Old Chicago Room No. 101

9:00 "The Prevention of Rheumatic Fever Recurrence"

Benjamin B. Berman, Granite City

9:20 "Problems in Learning from Clinical Experiences"

Eugene A. Stead, Jr., Durham, North Carolina, Professor and Chairman, Department of Medicine, Duke University Medical Center. Guest of Chicago Heart Association.

9:40 "Management of Acute Myocardial Infarction"

Theodore Z. Polley, Joliet, President, Illinois Heart Association

10:00 "The Evaluation of Older Patients with Cardiac Lesions Amenable to Surgical Treatment"

Robert O. Brandenburg, Rochester, Minnesota, Consultant in Medicine, Section on Cardiovascular Diseases, Mayo Clinic; Assistant Professor of Medicine, Mayo Foundation Graduate School, University of Minnesota

10:20 "Facts and Fancies in Treating Hypertension"

Ford K. Hick, Chicago, Professor of Medicine, University of Illinois College of Medicine

Business meeting and election of section officers

10:40 INTERMISSION TO VIEW EXHIBITS

11:00 PANEL SYMPOSIUM — with Section on Obstetrics and Gynecology, Crystal Room

"Cardiovascular Disease and Pregnancy"

MODERATOR: Wright Adams, Chicago, Professor of Medicine, University of Chicago; President, Chicago Heart Association

Robert O. Brandenburg, Rochester, Minnesota

Charles P. McCartney, Chicago, Associate Professor, Department of Obstetrics and Gynecology, University of Chicago

William F. Mengert, Chicago, Professor of Obstetrics and Gynecology, University of Illinois College of Medicine

Eugene A. Osius, Detroit, Michigan, Chief of Surgery, Harper Hospital; Associate Professor of Surgery, Wayne University College of Medicine.

SECTION ON OBSTETRICS & GYNECOLOGY

Chairman Ralph N. Redmond, Sterling
 Secretary Michael H. Boley, Chicago
 Tuesday Morning, May 19, 1959
 Crystal Room

- 9:00 "The Use and Abuse of General Anesthesia in Obstetrics"
 Arthur T. Shima, Oak Park, Chief, Department of Anesthesia, West Suburban Hospital; Assistant Clinical Professor of Anesthesiology, University of Illinois College of Medicine
- 9:20 "Gynecological Emergencies"
 Zachary J. Romeo, Rock Island, Chief, Department of Obstetrics and Gynecology, St. Anthony's Hospital
- 9:40 "Obstetrical Emergencies"
 Willard C. Scrivner, East St. Louis, Assistant Clinical Professor, Obstetrics and Gynecology, Washington University School of Medicine, St. Louis
- 10:00 "Vascular Complications in Pregnancy"
 Eugene A. Osius, Detroit, Michigan, Chief Surgeon and Chairman, Department of Surgery, Harper Hospital; Associate Professor of Surgery, Wayne University College of Medicine
- Business meeting and election of section officers
- 10:30 INTERMISSION TO VIEW EXHIBITS
- 11:00 PANEL SYMPOSIUM — With Section on Cardiovascular Disease, Crystal Room
 See "Section on Cardiovascular Disease" for panel program.

SECTION ON EYE, EAR, NOSE AND THROAT

Chairman C. L. Pannabecker, Peoria
 Secretary Wiley H. Harrison, Chicago
 Tuesday Morning, May 19, 1959
 Ruby Room No. 113

- 9:00 "Alpha-Chymotrypsin in Cataract Surgery"
 George J. Wyman, Peoria
- 9:20 "Strabismus"
 Eugene R. Folk, Skokie
- 9:40 "Eye Complications Resulting from Systemic Medication"
 Richard A. Perritt, Chicago
- 10:00 "Antibiotics — Trend in Eye, Ear, Nose and Throat"
 Mark H. Lepper, Chicago
- 10:30 Business meeting and election of section officers
- 11:00 ADJOURNMENT TO VIEW EXHIBITS

FIFTY YEAR CLUB LUNCHEON

Tuesday Noon, May 19, 1959
 Assembly Room

12:00 noon.

Dr. Andy Hall, chairman of the Fifty Year Club since its formation in 1937, will preside again this year at the annual complimentary luncheon honoring the members of the Fifty Year Club.

All physicians who have been in the practice of medicine for fifty years or more will be guests.

The speaker at the luncheon will be Dr. Theodore R. Van Dellen, Medical Editor of the Chicago Tribune, Associate Editor of the Illinois Medical Journal. His subject will be "Past 80—and Still Going Strong".

THE GENERAL ASSEMBLY

Tuesday Afternoon, May 19, 1959
 The Ballroom

- Presiding Edward W. Cannady
 Assisting Ralph N. Redmond
- 1:30 Opening of the General Assembly
 Raleigh C. Oldfield, Oak Park, President, Illinois State Medical Society
- 1:40 "Early Care of the Severely Injured"
 Henry K. Beecher, Boston, Massachusetts, Professor of Anesthesiology, Harvard Medical School; Head of Department of Anesthesiology, Massachusetts General Hospital
- 2:00 "Roentgen Diagnosis of Benign Gastric Ulcer"
 Harold O. Peterson, Minneapolis, Min-

nesota, Professor and Head of Department of Roentgenology, University of Minnesota Medical School

- 2:20 "Some Comments on Treatment of Congestive Heart Failure"
 Robert O. Brandenburg, Rochester, Minnesota, Assistant Professor of Medicine, Mayo Foundation Graduate School, University of Minnesota
- 2:40 "Indications for Surgery in Middle Ear Deafness"
 Bruce Proctor, Detroit, Michigan
- 3:00 INTERMISSION TO VIEW EXHIBITS
 Presiding Reginald M. Norris
 Assisting C. L. Pannabecker
- 3:30 PANEL Discussion on Surgical Infection

MODERATOR: Sumner L. Koch, Chicago, Professor of Surgery Emeritus, Northwestern University Medical School

Frank L. Meleney, Miami, Florida, Professor Emeritus, Clinical Surgery, Columbia; Lecturer in Surgery, University of Miami

Eugene A. Osius, Detroit, Michigan, Associate Professor of Surgery, Wayne University College of Medicine

Manuel Lichtenstein, Chicago, Chairman, Department of Surgery, Cook County Hospital

SECTION ON ANESTHESIOLOGY

Chairman Arthur T. Shima, Oak Park
Secretary James Felts, Marion

Tuesday Afternoon, May 19, 1959

Old Chicago Room No. 101

3:00 "Orthopedic Anesthesia in the Aged"
J. Sassbinder, East St. Louis

3:30 "General Anesthetic Care of Older Patients in a Community Hospital"
Robert F. Finegan, Elgin

4:00 "Anesthesia for the Geriatric Urology Patient"

Paul W. Searles, Chicago

Digby G. Seymour, Chicago

Business meeting and election of section officers

SECTION ON RADIOLOGY

Chairman William Mezaros, Chicago

Secretary Bertil Roseberg, Rockford

Tuesday Afternoon, May 19, 1959

Crystal Room

3:30 The guest moderator of the film reading session planned by the Section on Radiology will be Harold O. Peterson, Minneapolis, Minnesota, the out of state guest of the Section.

Business meeting and election of section officers

PUBLIC RELATIONS DINNER

6:30 p.m. George Bernard Shaw Room

The eighth annual Public Relations Dinner, sponsored by the Committee on Medical Service and Public Relations, will be held Tuesday evening. Percy E. Hopkins, chairman of the committee, will preside.

The program following the dinner will consist of a skit entitled: "Rx for a Common Code"—a

birdseye view of the trials and tribulations of the mythical medical team of "Cuttem, Slicem and Shotts" and their legal counterparts of "Hoop, Holler and Yelle", illustrating the pitfalls, cul de sacs and "just plain cussedness" which can be eliminated through mutual co-operation.

The skit will be presented by members of the Medico-Legal Committees of the Chicago Bar Association and the Chicago Medical Society.

PROGRAMS FOR WEDNESDAY, MAY 20, 1959

WOMEN PHYSICIANS' BREAKFAST

Wednesday Morning, May 20, 1959

Orchid Room No. 106

8:00 a.m.

On Wednesday morning, May 20, the women physicians registered at the 1959 annual meeting will be guests of the Illinois State Medical Society at a complimentary breakfast meeting.

This annual breakfast has been held for many years, and the women physicians have enjoyed a short program before the scientific sessions open at 9:00 o'clock.

The committee in charge this year is:

Augusta Webster, Chicago—Chairman, Gertrude M. Engbring, Chicago—Vice Chairman, Myrna F. Loth, Elizabeth A. McGrew, Johanna Heumann, Ruth E. Church, Barbara J. Hull

Tickets may be secured at the ticket desk on the mezzanine floor, or at the registration desk,

until closing time on Tuesday evening, May 19.

SECTION ON PEDIATRICS

Chairman Lawrence Breslow, Chicago

Secretary Homer F. Weir, Rockford

Wednesday Morning, May 20, 1959

Louis XVI Room

9:00 "Hyperthyroidism in the Newborn Infant"

Jose Gonzales and A. Raymond Eveloff, Springfield

9:20 "Juvenile Rheumatoid Arthritis; Diagnosis and Treatment"

Ira Rosenthal and Priscilla C. Reyes, Chicago, University of Illinois College of Medicine

9:40 "An Evaluation of Laboratory Diagnosis Methods in Thyroid Disturbances of Children"

Ralph H. Kunstadter, Chicago, Attending Pediatrician, Sarah Morris Hospital for Children, Michael Reese Medical Center

10:00 "The Celiac Syndrome"

Charles U. Lowe, Buffalo, New York
Research Professor of Pediatrics, University of Buffalo School of Medicine

10:30 INTERMISSION TO VIEW EXHIBITS

11:00 "The Adenoid and the Syndrome of Palato-pharyngeal Incompetence"

Edward F. Lis, Chicago, Associate Professor of Pediatrics, University of Illinois College of Medicine

11:15 "An Evaluation of Perinatal Factors in the Etiology of Cerebral Palsy, Mental Retardation, and Other Neurological Disorders"

Stewart H. Clifford, Boston, Boston Lying-In-Hospital, (Doctor Clifford appears under the auspices of the Illinois Chapter, American Academy of Pediatrics)

11:45 Business meeting and election of section officers

Luncheon in Louis XVI Room
with Illinois Chapter, American Academy of Pediatrics

SECTION ON SURGERY

Chairman Reginald M. Norris, Jacksonville

Secretary John B. Condon, Chicago

Wednesday Morning, May 20, 1959

Crystal Room

9:00 "ACUTE VASCULAR EMERGENCIES—Spontaneous and Traumatic"

MODERATOR: Robert A. DeBord, Peoria

Senior Surgeon, St. Francis Hospital

(1) "Acute Thoracic Vascular Emergencies, Symptoms, Diagnosis, Treatment and Cardiac Arrest"

Egbert H. Fell, Chicago
Clinical Professor of Surgery, University of Illinois College of Medicine

(2) "Abdominal Aneurysms, Acute Vascular Obstructions; Symptoms, Diagnosis and Treatment"

Ormand C. Julian, Chicago
Professor of Surgery, University of Illinois College of Medicine

(3) "Acute Traumatic Vascular and Acute Obstruction (Vascular) of Extremities"

Geza DeTakats, Chicago
Clinical Professor of Surgery, University of Illinois College of Medicine

(4) "Congenital Vascular Problems: Symptoms, Diagnosis and Treatment"
Thomas G. Baffes, Chicago
Associate, Department of Surgery, Northwestern University Medical School

10:00 "TUMORS OF THE NECK — Symptoms, Diagnosis, Pathology and Treatment"

MODERATOR: Howard P. Sloan, Bloomington

(1) "Benign Tumors of the Neck"

Leon J. Aries, Chicago
Associate Professor of Surgery, Chicago Medical School.

(2) "Malignant Tumors of the Neck"

Lindon Seed, Chicago
Clinical Associate Professor of Surgery, University of Illinois College of Medicine

(3) "Use and Abuse of Radioactive Material"

William J. Pickett, Chicago
Clinical Professor of Surgery, Stritch School of Medicine, Loyola University

(4) "Tumors of the Thyroid Gland"

William M. McMillan, Chicago
Assistant Professor of Surgery, Northwestern University Medical School.

11:00 "ACUTE ABDOMINAL EMERGENCIES: Symptoms, Diagnosis and Treatment"

MODERATOR: Karl A. Meyer, Chicago
Professor (Emeritus) of Surgery, Northwestern University Medical School

(1) "Diagnosis and Treatment of Acute Intestinal Obstruction"

Walter G. Maddock, Chicago
Professor of Surgery, Northwestern University Medical School

(2) "Acute Biliary Tract Pathology; Symptoms, Pathology and Treatment"

Warren H. Cole, Chicago
Professor and Head of Department of Surgery, University of Illinois College of Medicine

(3) "Treatment of Massive Gastrointestinal Hemorrhage"

J. Garrott Allen, Chicago
Professor of Surgery, University of Chicago Medical School.

(4) "Acute Perforations of Viscus; Symptoms, Diagnosis and Treatment"

Richard H. Lawler, Chicago
Associate Clinical Professor of Surgery, Stritch School of Medicine, Loyola University

Business meeting and election of section officers

SECTION ON EYE EAR NOSE AND THROAT

Chairman C. L. Pannabecker, Peoria
Secretary Wiley H. Harrison, Chicago

Wednesday morning, May 20, 1959

Ruby Room No. 113

- 9:00 "Combination Reconstruction — Nose and Chin"
Ira J. Tresley, Chicago
- 9:20 "Tympanoplasty"
Bruce Proctor; Detroit, Michigan
- 10:00 "The Ultrasonic Management of Meniere's Disease"
Richard P. Ariagno, Chicago
- 10:20 "Malignancies of the Paranasal Sinuses"
Delbert K. Judd, Kankakee
- 10:40 "The Diagnosis and Management of Laryngocele"
Kenneth Johnstone, Chicago
- 11:00 ADJOURNMENT TO VIEW EXHIBITS

Illinois Chapter

AMERICAN COLLEGE OF CHEST PHYSICIANS

Wednesday morning, May 20, 1959
Assembly Room

9:00 a.m.

1. "What's the Diagnosis?"
(Case presentations by various Chicago institutions)
2. "Tuberculous Enterocolitis and Other Obstructive Lesions of the Bowel"
Leroy Bernard, Chicago
Chief of Medical Services, Municipal Tuberculosis Sanatorium.
3. "Cycloserine in High Dosage in Salvage Cases of Pulmonary Tuberculosis"
Marjorie M. Pyle, Chicago
Chief of Medical Services, Chicago State Tuberculosis Sanatorium
Karl H. Pfuetze
William R. Barclay
John E. Kasik
4. "Pulmonary Hypertension Associated with Defects of the Interatrial and Interventricular Septa"
H. J. C. Swan, Rochester, Minnesota
Mayo Clinic

Luncheon

Illinois Chapter

AMERICAN COLLEGE OF CHEST
PHYSICIANS
Assembly Room
12:00 noon

PHYSICIANS' ASSOCIATION

State

Department of Public Welfare

Wednesday Morning, May 20, 1959

Gold Room No. 114

9:00 a.m.

1. "Design for State Hospital Treatment"
J. W. Klapman, Chicago
Chicago State Hospital
2. "Criminality Among Narcotic Addicts"
(Serving Sentence in the Illinois State Reformatory for Women)
Mr. Bernard F. Robinson, Dwight Sociologist, State Reformatory for Women
3. "Psychiatric Treatment of the Geriatric Patient in a State Mental Hospital"
Kurt Wolff, Galesburg
Clinical Director, Galesburg State Research Hospital
4. "Chlorpromazine — Four Years Later"
Werner Tuteur, Elgin
Clinical Director, Elgin State Hospital

ILLINOIS

ACADEMY OF GENERAL PRACTICE

Luncheon

Wednesday noon, May 20, 1959

Old Chicago Room No. 101

- 11:45 The Illinois Academy of General Practice has made arrangements to have a luncheon meeting again this year during the annual meeting of the Illinois State Medical Society.

All physicians are welcome to attend, and members of the Academy are especially invited to be present.

Officers of the Academy are:

President Robert E. Heerens, Rockford
President Elect John C. Smith, Cicero
Vice President Franz S. Steinitz, Chicago
Treasurer C. G. Sachtleben, Chicago
Executive Secretary ... H. Marchmont-Robinson, Chicago

The Academy of General Practice would like to call attention to the fact that for the first time, members of the Academy who attend the scientific programs of the Illinois State Medical Society may receive Category II credit for a maximum of 27 hours.

THE GENERAL ASSEMBLY

Wednesday afternoon, May 20, 1959
The Ballroom

Presiding Arthur T. Shima
Assisting William Meszaros

1:30 The President's Address: "The Senior
Citizen, Solution a Local Problem"

Raleigh C. Oldfield, Oak Park, Presi-
dent, Illinois State Medical Society

2:00 Annual Address in Medicine: "Sodium,
Hypertension and Primary Aldoster-
onism"

Jerome W. Conn, Ann Arbor, Michigan,
Professor of Medicine, University of
Michigan Medical School

2:45 Annual Address in Surgery: "Changing
Concepts in the Use of Antibiotics in
the Treatment of Surgical Infections"

Frank Lamont Meleney, Miami, Flor-
ida, Lecturer in Surgery, University
of Miami School of Medicine; Pro-
fessor Emeritus of Clinical Surgery,
Columbia University, New York

3:30 INTERMISSION TO VIEW EXHIBITS

Presiding Herbert P. Friedman
Assisting Herbert S. Miller

4:00 CLINICAL PATHOLOGICAL CONFER-
ENCE

Internist: Edmund F. Foley, Chicago,
Professor of Medicine, University of
Chicago

Pathologist: James W. Reagan, Cleve-
land, Ohio, Institute of Pathology,
Western Reserve University School
of Medicine



THE ANNUAL DINNER

Wednesday evening, May 20, 1959
The Ballroom

7:00 o'clock

The annual dinner this year will honor Dr.
Raleigh C. Oldfield of Oak Park, the retiring presi-
dent of the Illinois State Medical Society. The
toastmaster will be the immediate past president,
Dr. Lester S. Reavley of Sterling.

Miss Ann Landers of Chicago will be the speak-
er. This will be the first time that a woman has

been asked to speak to our annual dinner. Her
subject will be "Troubles I Have Seen."

Dr. Walter Bornemeier is the chairman of the
Annual Dinner Committee; the Woman's Auxil-
iary will assist in the evening activities and the
decorations for the Ballroom.

The President's Certificate will be presented to
Dr. Oldfield by the Chairman of the Council, Dr.
Burtis E. Montgomery of Harrisburg.

Health Progress Awards will also be presented
during the evening.



PROGRAMS FOR THURSDAY, MAY 21, 1959

SECTION ON DERMATOLOGY

Chairman William K. Ford, Rockford
Secretary J. M. McCuskey, Peoria

Thursday morning, May 21, 1959
Old Chicago Room No. 101

9:00 "Physiology of the Aging Skin"

Allan L. Lorincz, Chicago, Associate
Professor of Dermatology, University
of Chicago College of Medicine

9:30 "Common Skin Diseases of the Aged"

William N. Slinger, Rockford, Assistant
in Dermatology, Northwestern Uni-
versity Medical School, Chicago

10:00 "Treatment of the Aged Skin"

Hilliard M. Shair, Quincy, Dermatology
Department, Physicians and Surgeons
Clinic

10:30 INTERMISSION TO VIEW EXHIBITS

11:00 PANEL: "Neoplasms of the Skin of the
Aged"

Chairman: Marcus R. Caro, Chicago
Harvey Blank, Miami, Florida, Profes-
sor and Chairman, Department of
Dermatology, University of Miami
Cecil A. Krakower, Chicago, Professor
and Head of Department of Pathol-
ogy, University of Illinois College of
Medicine.

Danely P. Slaughter, Chicago, Director
of Tumor Clinic, Research and Edu-
cational Hospital, University of Illi-
nois

Theodore J. Wachowski, Aurora, Radi-
ologist, Copley Memorial Hospital
The panel will present colored lantern
slides to illustrate various benign and

malignant tumors of the skin, and will discuss the diagnosis and treatment of each.

Business meeting and election of section officers

12:00 LUNCHEON — for members of the section and their guests.
Old Chicago Room No. 101

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

Chairman Herbert S. Miller, Winnetka
Secretary Herbert Ratner, Oak Park

Thursday morning, May 21, 1959
The Assembly Room

9:00 PANEL AND OPEN DISCUSSION:
"Modern Threats to the Profession of Medicine"

Moderator: Herbert Ratner, Oak Park
Michael J. Brennan, Henry Ford Hospital, Detroit, Michigan
Harlan English, Danville
Robert E. Heerens, Rockford
Eugene T. Hoban, Oak Park
Joseph R. O'Donnell, Glen Ellyn
Claire M. Ryder, Washington, D. C.
U. S. Public Health Service

11:00 Business meeting and election of section officers

11:15 ADJOURNMENT TO VIEW EXHIBITS

12:00 LUNCHEON: Section on Preventive Medicine and Public Health
Illinois Association of Medical Health Officers
Illinois Academy of Preventive Medicine
Illinois Chapter, American Association of Public Health Physicians

Speaker: Walter Whitaker, Quincy
"Staphylococcus Infections — Prevention and Control"

Adjournment by 1:30 to attend "General Assembly" in the Ballroom

SECTION ON MEDICINE

Chairman Charles F. Downing, Decatur
Secretary Charles A. Gianasi, Chicago

Thursday morning, May 21, 1959
Crystal Room

9:00 "The Significance of Gall bladder Deformities"

Edward M. Cook, Jr., Decatur, Assistant Radiologist, Decatur and Macon County Hospital

9:15 — Discussion

9:20 "The Significance of Pleural Effusion"
Stanford K. Sweany, Chicago, Chief, Pulmonary Disease Section, Veterans

Administration Research Hospital

9:35 — Discussion

9:40 "How To Stay Young"

Robert M. Kark, Chicago, Professor of Medicine, University of Illinois College of Medicine

10:00 INTERMISSION TO VIEW EXHIBITS
10:30 PANEL: "The Diagnosis and Treatment of Thyrotoxicosis"

MODERATOR: Samuel P. Asper, Jr., Baltimore, Maryland Associate Dean, Johns Hopkins University School of Medicine

Lindon Seed, Chicago, Associate Professor of Surgery, University of Illinois College of Medicine

George V. LeRoy, Chicago, Associate Dean, University of Chicago School of Medicine

Business meeting and election of section officers

12:00 Luncheon for section members and their guests in the Jade Room No. 103.

SECTION ON ALLERGY

Chairman Norman Ehrlich, Chicago
Secretary Robert Becker, Joliet

Thursday morning, May 21, 1959
Gold Room No. 114

9:00 PANEL — "Bronchial Asthma, Diagnosis, Differential Diagnosis and Treatment"

MODERATOR — Samuel Bukantz, Denver, Medical and Research Director at Jewish National Home for Asthmatic Children

Discussants: Lawrence Breslow, Chicago, Clinical Assistant Professor of Pediatrics, University of Illinois College of Medicine

George Pollock, Chicago, Associate Professor, Department of Psychiatry, University of Illinois College of Medicine

Ben Z. Rappaport, Chicago, Clinical Professor, Department of Medicine, Head of Allergy Unit, University of Illinois College of Medicine

Gordon Snider, Chicago, Assistant Professor of Medicine, Chicago Medical School; Assistant Director, Chest Department, Michael Reese Hospital.

David W. Talmage, Chicago, Associate Professor of Medicine, University of Chicago, Division of Allergy

10:30 Open discussion and questions

11:00 Business meeting and election of section officers

11:30 ADJOURNMENT FOR VIEWING EXHIBITS

12:30 Luncheon for the Section members and their guests will be held in the Ruby Room No. 113.

PHI CHI LUNCHEON

Thursday noon, May 21, 1959
Life Room No. 108

12:00 noon

The Phi Chi fraternity will have a luncheon meeting on Thursday noon. Dr. Jacob E. Reisch, Springfield, editor of the Phi Chi Bulletin, will be in charge of plans.

All members of the fraternity are welcome.

THE GENERAL ASSEMBLY

Thursday afternoon, May 21, 1959
The Ballroom

Presiding Lawrence Breslow
Assisting Norman Ehrlich

1:30 "A Review of the 1958 Poliomyelitis Epidemic in Detroit"
Joseph G. Molner, Detroit, Michigan,
Commissioner of Health

1:50 "A Critical Re-evaluation of Nutritional Requirements in Growth and Development"
Charles U. Lowe, Buffalo, New York,
Research Professor of Pediatrics,
University of Buffalo School of Medicine

2:10 "Therapeutic Complications During Use of Cortico-Steroids"
Samuel C. Bukantz, Denver, Colorado,
National Home for Asthmatic Children

2:30 "Prognosis in the Cancer Patient"
James W. Reagan, Cleveland, Ohio,
Institute of Pathology, Western Reserve University School of Medicine

2:45 "Systemic Therapy of Superficial Fungus Infections"
Harvey Blank, Miami, Florida, Professor and Chairman, Department of Dermatology, University of Miami

3:00 INTERMISSION TO VIEW EXHIBITS

Presiding Charles F. Downing
Assisting William K. Ford

3:30 SYMPOSIUM: "Medical Aspects of Geriatrics"

MODERATOR: George V. Byfield, Chicago, Assistant Professor of Medicine, University of Illinois College of Medicine

Samuel P. Asper, Jr., Baltimore, Maryland, Associate Dean, Johns Hopkins University School of Medicine

Claire Ryder, Washington, D.C., United States Public Health Service

Samuel Liebman, Winnetka, Medical Director, North Shore Hospital

Hiram Langston, Chicago, Clinical Associate Professor of Surgery University of Illinois College of Medicine

LOYOLA ALUMNI BANQUET

Thursday evening, May 21, 1959
The Crystal Room

6:30 p.m.

The medical alumni of Stritch School of Medicine, Loyola University are planning a dinner meeting during the annual meeting of the Society.

Special announcements of the classes to be honored, the speaker for the evening, and other arrangements will be published in the official program.

PROGRAMS FOR FRIDAY, MAY 22, 1959

SECTION ON PATHOLOGY

Chairman Herbert P. Friedman, Urbana
Secretary J. Robert Thompson, Chicago

Friday morning, May 22, 1959
Crystal Room

(Joint Meeting with Illinois Society of Pathologists)

9:00 PANEL: "Exfoliative Cytology in Your Practice"

MODERATOR: J. Robert Thompson, Chicago, Director of Laboratory, City of Chicago, Municipal Tuberculosis Sanitarium; Clinical Assistant Professor of Pathology, University of Illinois College of Medicine.

James W. Reagan, Cleveland, Ohio, Institute of Pathology, Western Reserve University.

Elizabeth McGrew, Chicago, Associate Professor of Pathology, University of Illinois College of Medicine

Ronald Greene, Chicago, Associate Professor of Obstetrics and Gynecology, Northwestern University Medical School; Senior Attending Obstetrician and Gynecologist, Wesley Memorial Hospital.

Harold Grimm, St. Charles, Clinical Associate Professor of Pathology, Uni-

versity of Illinois College of Medicine.

Question and Answers

10:30 INTERMISSION TO VIEW EXHIBITS

11:00 "Cellular Diagnosis of Adenocarcinoma of the Female Genital Tract"

James W. Reagan, Cleveland, Ohio, Institute of Pathology, Western Reserve University

12:00 Luncheon and business meeting — Illinois Society of Pathologists.

Old Chicago Room No. 101

AMERICAN COLLEGE OF SURGEONS

Friday Morning, May 22, 1959

Assembly Room

SYMPOSIUM ON TRAUMA

9:00 "Injuries to the Wrist"

Moderator: Ralph Lidge, Chicago

Panelists: Robert Mussey, Urbana

Harry I. Kaell, Chicago

10:00 "Some Amputation 'Pointers'"

Robert Thompson, Chicago

10:25 — Discussion

10:30 INTERMISSION

10:45 "The Unconscious Injured Patient"

Oscar Sugar, Chicago

11:15 — Discussion

11:20 "Laryngeal Trauma"

Kenneth C. Johnston, Chicago

11:55 — Discussion

12:00 — LUNCHEON

Friday afternoon, May 22, 1959

Assembly Room

2:00 "Fractures of the Femoral Shaft"

Fred Stuttle, Peoria

2:25 — Discussion

2:30 "Management of Hip Fractures"

George Millington, Chicago

2:55 — Discussion

3:00 INTERMISSION

3:10 "Fractures of the Tibia" (Including Knee and Ankle Areas)

Moderator:

Vernon Turner, Evanston

Panelists:

Robert Meany, Chicago

Howard Schneider, Chicago

James Kurtz, LaGrange.

ILLINOIS ASSOCIATION OF BLOOD BANKS

Friday Afternoon, May 22, 1959

Crystal Room

Presiding: Francis J. Tenczar, Wesley Memorial Hospital, Chicago

SYMPOSIUM ON HEMOPHILIA

(In collaboration with the Hemophilia Foundation), Conducted by Armand J. Quick, Milwaukee, Wisconsin, Professor of Biochemistry, Marquette University School of Medicine

2:00 "The Mechanism of Blood Coagulation"
Basic principles and utilization of laboratory techniques in the clotting mechanism.

2:40 Question and Answer Period

3:00 "Hemophilia: Diagnosis and Hemotherapy"

Current research and future outlook.

3:30 Question and Answer Period

3:45 "The Role of the Blood Bank in Hemotherapy of the Hemophiliac"

William S. Kyler, Administrative Director, Chicago Blood Donor Service

4:00 Business Meeting — Illinois Association of Blood Banks.

The Section on Pathology will have a joint meeting with the Illinois Society of Medical Technologists at the Hotel Sherman all day on Saturday, May 23.

Have you read Ann Lander's widely syndicated column? She's the interesting speaker at the Annual Dinner. Don't miss her!

SCIENTIFIC EXHIBITS

COMMITTEE ON SCIENTIFIC EXHIBITS

Coye C. Mason, Director and Chairman . Chicago
Arkell M. Vaughn Chicago
Charles P. McCartney Chicago
Leo M. Zimmerman Chicago
L. W. Peterson Chicago
Harold L. Method Chicago
Everett P. Coleman Canton
J. C. Thomas Rogers Urbana

BOOTH No. 1

TITLE: Cholecystography with Bunamiodyl.

EXHIBITOR: William T. Meszaros and Frederick M. Rich.

INSTITUTION: Cook County Hospital, Department of Radiology.

DESCRIPTION: Roentgenologic studies of the gallbladder are demonstrated, as visualized with Bunamiodyl, a new oral cholecystographic agent.

BOOTH No. 2

TITLE: The Adrenal Cortex in Health and Disease.

EXHIBITOR: Hans Elias and John E. Pauly.

INSTITUTION: Chicago Medical School.

DESCRIPTION: Drawings and photographs mounted on peg boards.

BOOTH No. 3

TITLE: Roentgen and Hematological Manifestations of the Congenital Hemolytic Anemias.

EXHIBITOR: Joseph J. Litschgi.

INSTITUTION: Cook County Hospital, Hektoen Institute for Medical Research.

DESCRIPTION: Roentgen and hematological findings are presented in this exhibit to expedite early diagnosis and prompt respective treatment. The study points out that the radiologist should be familiar with the roentgen changes to enable him to instigate hematological work-up where it had not been done. Blood pictures and hemoglobin pattern is given with each case.

BOOTH No. 4

TITLE: Maternal and Newborn Birth Trauma.

EXHIBITOR: Frederick H. Falls and Charlotte S. Holt.

INSTITUTION: Illinois State Department of Public Health.

DESCRIPTION: The exhibit consists of drawings, lettered charts and sculptures depicting the pathology, diagnosis and repair of birth trauma. It is divided in two parts, one showing the lesions in the maternal birth canal and the other the lesions in the fetus. Treatment of the lesions is discussed in the exhibit.

BOOTH No. 5

TITLE: Cervical Epithelial Dysplasia—Experimentally Produced.

EXHIBITOR: Harold A. Kaminetzky, Elizabeth A. McGrew, Richard Phillips. Otto Saphir and Michael Leventhal.

INSTITUTION: University of Illinois and Michael Reese Hospitals.

DESCRIPTION: Changes resembling atypical epithelial hyperplasia and carcinoma-in-situ can be produced experimentally in the human and mouse cervix by application of podophyllin. Human subjects were from women soon to undergo hysterectomy. The exhibit consists of before and after colored photomicrographs and necessary descriptions.

BOOTH No. 6

TITLE: Open Healing of Tuberculous Cavities.

EXHIBITOR: J. Robert Thompson.

INSTITUTION: Municipal Tuberculosis Sanitarium.

DESCRIPTION: The pathogenesis and pathology of "open-healing" are depicted by photographs and gross specimens.

BOOTH No. 7

TITLE: Broad Spectrum Antibiotics in Dermatology.

EXHIBITOR: Theodore Cornbleet and David Omens.

INSTITUTION: University of Illinois College of Medicine and Cook County Hospital.

DESCRIPTION: A large number of colored and black and white transparencies will be shown. These depict dermatoses that respond to broad-spectrum antibiotic therapy. The relative safety of the "broad spectrums" will be stressed.

BOOTH No. 8

TITLE: New Steroid Compounds with Progestational Activity.

EXHIBITOR: J. W. Crosson, I. C. Winter and F. J. Saunders.

INSTITUTION: G. D. Searle and Co.

DESCRIPTION: Differences in chemical structure of new steroid compounds with progestational activity will be demonstrated by structural formulae. The clinical activity and effects of these compounds will be described by charts and by colored photographs of endometrial biopsies taken from patients under treatment. Particular attention will be called to norethynodrel and norethindrone.

BOOTH No. 9

TITLE: Severe Bronchial Irritation—Office and Home Managements.

EXHIBITOR: Edwin Rayner Levine.

INSTITUTION: Edgewater Hospital and Chicago Medical School.

DESCRIPTION: Principles of therapy are shown and techniques applicable to treatment at home and in the office are demonstrated. New developments and new techniques for using bronchodilator and liquefying aerosols will be shown.

BOOTH No. 10

TITLE: Management of the Difficult Geriatric Patient.

EXHIBITOR: Franz S. Steinity, Bertram Moss and Henry Heller.

INSTITUTION: Edgewater Hospital (Titus Werner Clinic).

DESCRIPTION: The increasing number of older patients who may represent a problem in therapy by reason of early cerebral arteriosclerotic or senile changes is presented in relation to the various aspects of the problem. A program of management including the use of oral pentamethylenetetrazol (Metrazol) therapy is described and the results noted.

BOOTH No. 11

TITLE: The Specific Adaptation Syndrome.

EXHIBITOR: Theron G. Randolph.

DESCRIPTION: Specific adaptations to oft-repeated biological and chemical exposures in susceptible persons manifest as chronic illness. This exhibit describes the stages of the process and its clinical manifestations.

BOOTH No. 12

TITLE: Buccal and Enteric Coated Trypsin—A Review of 150 Cases.

EXHIBITOR: John M. Coleman and Arkell M. Vaughn.

INSTITUTION: Cook County Hospital, Mercy Hospital-Loyola Clinic and Vaughn Medical Group.

DESCRIPTION: A review of physiology and case studies of 150 patients treated with buccal and enteric coated trypsin with the results and conclusions.

BOOTH No. 13

TITLE: Bronchography.

EXHIBITOR: Hiram Langston, Anton Pantone, Myron Melamed and Noble Correll.

INSTITUTION: Chicago State Tuberculosis Sanitarium.

DESCRIPTION: The exhibit depicts the result of rapid Bronchography. Dionosil (oily) was used in all cases. The nature of the cases examined suggests that Bronchography can be done practically with impunity.

BOOTH No. 14

TITLE: Current Trends in Tuberculosis—Chicago 1950-1959.

EXHIBITOR: M. R. Lichtenstein and Samson D. Entin.

INSTITUTION: Municipal Tuberculosis Sanitarium of Chicago.

DESCRIPTION: A graphic presentation is made of the changes which have occurred in pulmonary tuberculosis in the City of Chicago following the widespread use of antituberculous chemotherapy. Several phases of this subject are demonstrated.

BOOTH No. 15

TITLE: Routine Examination for Cancer Detection.

EXHIBITOR: F. Lee Stone and Caesar Portes.

INSTITUTION: Cancer Prevention Center of Chicago, Inc.

DESCRIPTION: The exhibit will display and describe the routine cancer detection examination given to apparently well persons at the Cancer Prevention Center. It emphasizes early detection of cancer and demonstrates how each doctor can achieve this end.

BOOTH No. 16

TITLE: Hemophilia.

EXHIBITOR: Mary Simunich.

INSTITUTION: Mid West Chapter of the Hemophilia Foundation.

DESCRIPTION: The exhibit includes the diagnosis and management and genetic transmission of Hemophilia.

BOOTH No. 17

TITLE: Easter Seals at Work—Step by Step.

EXHIBITOR: The Easter Seal Society in Illinois.

INSTITUTION: Illinois Association for the Crippled, Inc.

DESCRIPTION: A portrayal of Easter Seal services growth and development in the last twelve years up to present services available and future plans.

BOOTH No. 18

TITLE: "Old Doc", First Auto Test Driver.

EXHIBITOR: Harold M. Camp and Theodore R. Van Dellen.

INSTITUTION: Illinois Medical Journal.

DESCRIPTION: The role of physicians in the development of automobiles is told in this exhibit.

BOOTH No. 19

TITLE: Does Your County Have a Health Department?

EXHIBITOR: Harold K. Fuller.

INSTITUTION: Illinois State-wide Public Health Committee.

DESCRIPTION: The exhibit shows through the use of stills and slides the services of a full time county health department.

BOOTH No. 20

TITLE: Examination of the Colon and Rectum.

EXHIBITOR: John A. Rogers.

INSTITUTION: American Cancer Society, Illinois Division, Inc.

DESCRIPTION: The exhibit consists of two panels. The left panel depicts areas seen through the sigmoidoscope. The right panel gives figures on the incidence of cancer at these sites and the comparative incidence between groups with and without polyps.

BOOTH No. 21

TITLE: Aging.

EXHIBITOR: John Guy Miller and Joe D. Miller.

INSTITUTION: American Medical Association.

DESCRIPTION: This exhibit shows a positive health program for Older Citizens.

BOOTH No. 22

TITLE: Pain and Osteoporosis in Neck and Low Back.

EXHIBITOR: George S. Hackett.

INSTITUTION: Mercy Hospital, Canton, Ohio.

DESCRIPTION: Articular ligaments of the spine and pelvis that do not regain their normal tensile strength following severe sprains is discussed as to origin and treatment.

BOOTH No. 23

TITLE: Physician's Responsibility in Highway Accidents.

EXHIBITOR: Howard N. Schulz, Council on Industrial Health.

INSTITUTION: American Medical Association.

DESCRIPTION: The exhibit emphasizes the physician's role in the prevention of highway accidents.

BOOTH No. 24

TITLE: Services for the Visually Handicapped.

EXHIBITOR: Otto L. Bettag.

INSTITUTION: Illinois Department of Public Welfare.

DESCRIPTION: The exhibit will demonstrate the services available to the visually handicapped through the Public Welfare Department.

BOOTH No. 25

TITLE: The Doctor Looks at Vocational Rehabilitation.

EXHIBITOR: Otto L. Bettag.

INSTITUTION: Illinois Division of Vocational Rehabilitation.

DESCRIPTION: The exhibit features the purpose of the Division of Vocational Rehabilitation and the services available to the physically handicapped through the Division. One or two disabled persons will demonstrate the skills learned as a result of vocational rehabilitation.

TECHNICAL EXHIBITORS

Abbott Laboratories, North Chicago, Illinois, Booth 20

Association of American University Presses, Booth 40

Audio Digest Foundation, Glendale, California, Booth 18

Black & Skaggs, Bloomington, Illinois, Booth 24

Blue Shield Plan, Rockford, Illinois, Booth 36

Blue Shield — Illinois Medical Service (see under "I")

Borchardt Company, Chicago, Illinois, Booth 78

George A. Breon & Company, New York, Booths 38 & 39

Brooks Appliance Company, Chicago, Illinois, Booth 10

Chicago Pharmacal Company, Chicago, Illinois, Booth 65

Ciba Pharmaceutical Products, Inc., Summit, New Jersey, Booth 25

The Coca Cola Company, Atlanta, Georgia, Booth 14

Daniels Surgical & Medical Supplies, Chicago, Illinois, Booths 15, 16, 17

Desitin Chemical Company, Providence, Rhode Island, Booth 6

The Dietene Company, Minneapolis, Minn, Booth 37

Doho Chemical Corporation, New York, Booth 33

Eaton Laboratories, Norwich, New York, Booth 3

Eisele & Company, Nashville, Tennessee, Booth 8

Eli Lilly & Company, Indianapolis, Indiana, Booth 2

Emanem Laboratories, Chicago Booth 44

Encyclopaedia Britannica, Inc., Chicago, Illinois, Booth 47

Marshall Erdman and Associates, Madison, Wisconsin Booths 61 & 62

E. Fougere & Company, Inc., Hicksville, New York, Booth 30

Geigy Pharmaceuticals, Yonkers, New York, Booth 74

Great Books of the Western World, Grand Rapids, Michigan, Booth 77

Health Insurance Council, Chicago, Illinois, Booth 31

Illinois Medical Service, (Blue Shield) Chicago, Illinois, Booth 58

Lederle Laboratories, American Cyanamid Com-

- pany, Pearl River, New York, Booth 13
J. B. Lippincott Company, Philadelphia, Pennsylvania, Booth 59
Loma Linda Food Company, Arlington, California, Booth 9
P. Lorillard Company, New York, Booth 5
Marshall Erdman & Associates, Madison, Wisconsin, Booths 61 and 62
Massachusetts Indemnity & Life Insurance Co., Boston, Massachusetts, Booth 57
S. E. Massengill Company, Kansas City, Missouri, Booth 27
Medco Products, Tulsa, Oklahoma, Booth 26
Medical Aids, Inc., Park Ridge, Illinois, Booth 72
Medical Protective Company, Fort Wayne, Indiana, Booth 73
Merck, Sharp & Dohme, Philadelphia, Pennsylvania, Booth 67
C. V. Mosby Company, St. Louis, Missouri, Booth 63
V. Mueller & Company, Chicago, Illinois, Booth 68
Hermien Nusbaum & Associates, Chicago, Illinois, Booth 60
OMS Surgical Supply Company, Chicago, Illinois, Booth 45
Parke, Davis & Company, Detroit, Michigan, Booth 71
Parker, Aleshire & Company, Chicago, Illinois, Booth 12
Pfizer Laboratories, Brooklyn, New York, Booth 21
The Purdue Frederick Company, New York, Booth 79
Rasman Pharmacal Company, Oak Park, Illinois, Booth 34
R. J. Reynolds Tobacco Company, Winston-Salem, North Carolina, Booth 46
A. H. Robins Company, Inc., Richmond, Virginia, Booth 66
Roche Laboratories, Nutley, New Jersey, Booth 11
J. B. Roerig & Company, New York, Booth 7
Sanborn Company, Waltham, Massachusetts, Booth 64
W. B. Saunders Company, Philadelphia, Pennsylvania, Booth 69
Julius Schmid, Inc., New York, Booth 56
G. D. Searle & Company, Chicago, Illinois, Booth 70
7-Up Developers' Association, Chicago, Booth 1
Smith Kline & French Laboratories, Philadelphia, Pennsylvania, Booth 19
E. R. Squibb & Sons, New York, Booth 76
Standard Process Laboratories, Milwaukee, Wisconsin, Booth 22
Strassenburgh Laboratories, Rochester, New York, Booth 23
Thermo-Fax Sales Corporation, Chicago, Illinois, Booths 28-29
United States Tobacco Company, New York, Booth 35
University of Chicago Press, Chicago, Illinois, Booth 40
The Upjohn Company, Kalamazoo, Michigan, Booth 75
Westwood Pharmaceuticals, Buffalo, New York, Booth 32
Winthrop Laboratories, New York, Booth 4

These technical exhibitors deserve and will welcome your visit during the Annual Meeting. As always, they will bring valuable contributions to the advancement of our profession. You will profit by meeting them.

ANNUAL MEETING COMMITTEES

COMMITTEE ON ARRANGEMENTS

Chairman Allison L. Burdick Sr., Chicago
Vice Chairman Andrew J. Brislen, Chicago

COMMITTEE ON REGISTRATION AND INFORMATION

Chairman Holger N. Hoegh, Chicago
Vice Chairman Carl E. Clark, Sycamore
A. E. Ablaza, Chicago
C. W. Bibb, Chicago
A. R. Bogue, Rochelle
A. G. Ceaser, Chicago
F. L. Eihl, Moline
F. D. Garcia, Chicago
R. R. Hartman, Jacksonville
R. E. Heerens, Rockford
G. A. Hemwall, Chicago
A. E. Joslyn, Maywood
M. J. Parenti, Chicago
E. F. Lutterbeck, Chicago
L. F. Roblee, Lockport
M. J. Shaykin, Chicago
C. O. Smith, Oak Park
J. C. Sodaro, Forest Park
Erich Stern, Decatur
Clinton Swickard, Charleston
H. E. Tarpley, Greenville
N. A. Thompson, Eldorado
W. H. Walton, Belleville
Jas. Weatherly, Murphysboro

ANNUAL DINNER COMMITTEE

Chairman Walter C. Bornemeier, Chicago
Vice Chairman Fred C. Endres, Peoria
Fred Tworoger, Chicago
Wm. C. Hopkins, Chicago
Robert C. Kloempken, Arlington Heights
Lee N. Hamm, Lincoln

PUBLICITY COMMITTEE

Chairman Theodore R. Van Dellen, Chicago
Vice Chairman . . . Wm. H. Wehrmacher, Chicago
Albert VanderKloot, Chicago
Edward R. Pinckney, Chicago
Andrew J. Oberlander, Arlington Heights

TECHNICAL EXHIBITS COMMITTEE

Chairman James D. Majorakis, Chicago
Vice Chairman Harold S. Glassman, Chicago
A. J. Bulfer, Chicago
David Fox, Chicago
Wm. Hand, Chicago
John S. Hyde, Chicago
Mladen Mijanovich, Marengo
Sterling G. Parker, Decatur
Everett Van Reken, Oak Park
Charles J. Weigel, River Forest

COMMITTEE TO ENTERTAIN DISTINGUISHED GUESTS

Chairman Paul A. Dailey, Carrollton
Vice Chairman Lester S. Reavley, Sterling
Carleton R. Smith, Peoria
Paul P. Youngberg, Moline
Lorne Mason, Evanston

WOMEN PHYSICIANS' COMMITTEE

Chairman Augusta Webster, Chicago
Vice Chairman . . . Gertrude M. Engbring, Chicago
Myrna F. Loth
Elizabeth A. McGrew
Johanna Heumann
Ruth E. Church
Barbara J. Hull

The 1959 WOMAN'S AUXILIARY PROGRAM

Registration

Lobby Floor Sherman Hotel
Tuesday May 19, 1959 7:30 a.m. to 4:00 p.m.
Wednesday May 20, 1959 7:30 a.m. to 4:00 p.m.

PRE-CONVENTION SCHEDULE

Tuesday May 19, 1959
Pre-Convention Board Meeting
Gold Room No. 114 8:30 a.m.

CONVENTION PROGRAM

Tuesday May 19, 1959
George Bernard Shaw Room
Formal opening of the 31st Annual Meeting
10:00 a.m.

Mrs. Fred Endres,
President, Presiding

Invocation The Rev. Richard M. George,
Rector, St. Richard's Episcopal Church, Edgebrook
Pledge to the Flag Mrs. E. M. Egan
Publications Chairman, Woman's Auxiliary to the
American Medical Association
Pledge of Loyalty Mrs. James P. Simonds
Woman's Auxiliary to the American Medical Association
Welcome Mrs. John Malcom Tindal
President of the Woman's Auxiliary to the
Chicago Medical Society
Response Mrs. M. Thomas Gorsuch
President of the Woman's Auxiliary to the
Peoria County Medical Society
Report of Credentials and Registration Committee
..... Mrs. John Koenig, Chairman
Reading of the Convention Rules of Order
..... Mrs. Percy M. Clark, Parliamentarian
Adoption of Convention Program
Announcement of Reference Committee Appointments
Appointment of Committee on Courtesy and Resolutions
Appointment of Election Committee
Appointment of Reading Committee
Greeting from the Illinois State Medical Society
Walter C. Bornemeier, M. D.
Chairman of the Advisory Committee
Convention Announcements
..... Mrs. Richard E. Westland, Convention Chairman
Report of the Revision Committee
..... Mrs. Robert Dunlevy, Chairman
Adjournment

LUNCHEON

Louis XVI Room 12:30 p.m.
Mrs. Fred Endres, Presiding
Program Mrs. Norma Eaton
"Let's Stop and Think"

Hostess Branch Adams County
..... Mrs. Carl Hagler, Chairman
DELEGATES RECONVENE

Report of County Presidents George Bernard Shaw Room
Councilors will introduce the Presidents of their District.
Members of the Auxiliary are invited to attend the Pub-
lic Relations Dinner at 6:30 p.m.

SECOND SESSION-DELEGATES

Wednesday May 20, 1959
CONTINENTAL BREAKFAST
George Bernard Shaw Room 8:00 a.m. to 9:00 a.m.
honoring
County Presidents
Mrs. Frederick J. Roos Chairman

ROUND TABLES — 9:15 to 10:00 a.m.

1. Presidents and Presidents-Elect
Mrs. John Van Prohaska Chairman
Mrs. Charles Wunsch
Jade Room No. 103
2. Publications
Mrs. Allen S. Watson Chairman
Today's Health, Bulletin, and History of Medicine
Life Room No. 108
3. Legislation
Mrs. Charles W. Stigman Chairman
Time Room No. 110
4. Projects
Mrs. Eugene T. McEnery Chairman
A.M.E.F., Benevolence, Mental Health, and Recruit-
ment
Gold Room No. 111

SECOND DELEGATE SESSION

10:15 a.m.

George Bernard Shaw Room
Mrs. Fred Endres, President, Presiding
PRESIDENTS' REPORTS

Speaker 11:30 a.m.
Mr. Frank Burrows, Jr.
Field Service Director
Citizen's Traffic Safety Board of Chicago
Introduction of Speaker
..... Mrs. W. W. Davidson, Safety Chairman
MEMORIAL SERVICE 12:15 p.m.
Conducted by Mrs. Matthew E. Uznanski

THE ANNUAL DINNER

Wednesday Evening
GRAND BALLROOM

SHERMAN HOTEL

Hospitality Hour 6:30 p.m.
Dinner 7:30 p.m.
in honor of
Raleigh C. Oldfield, M.D.
Miss Ann Landers, syndicated columnist, will speak on
"Troubles I Have Seen."

THIRD DELEGATE SESSION

George Bernard Shaw Room
May 21, 1959 9:00 a.m.
Mrs. Fred Endres, President, Presiding
Report of Courtesy & Resolutions Committees
..... Mrs. Edward G. Warnick
Final Report of Credentials and Registration Committee
..... Mrs. John Koenig
Reference Committee Reports:
Mrs. Nicholas Chester, Chairman
Report of Officers & Directors
..... Mrs. Henry Christiansen
Report of Standing Committees
..... Mrs. Albert T. Kwedar
Presentation of the Budget for 1959-60
..... Mrs. S. M. Hubbard
Report of the Nominating Committee
..... Mrs. Nicholas G. Chester
Election of Officers

Election of Delegates to the Woman's Auxiliary to the American Medical Association.
New Business
Convention Announcements

INSTALLATION LUNCHEON

HOTEL SHERMAN

Bal Tabarin 1:00 p.m.

Honoring

Mrs. Fred C. Endres Retiring President
Mrs. John Van Prohaska Incoming President
and Past Presidents of the Woman's Auxiliary to the Illinois State Medical Society.

Installation of Officers Mrs. Henry L. Schmitz
Hostess Branch — Peoria County

Mrs. Ward Eastman Chairman
Dramatic Program Mrs. Frances Nash Donovan

Post convention

Board Meeting Room No. 107, Hotel Sherman 3:00 p.m.
Mrs. John Van Prohaska, Presiding

CONVENTION COMMITTEES

CONVENTION CHAIRMAN
..... Mrs. Richard E. Westland

HONORARY CHAIRMAN

Mrs. Raleigh C. Oldfield Mrs. G. Henry Mundt
Mrs. Walter C. Bornemeier Mrs. Ralph N. Redmond
Mrs. C. Elliot Bell Mrs. Joseph T. O'Neill
Mrs. B. E. Montgomery

PRESS AND PUBLICITY

Chairman Mrs. S. G. Plice
Co-Chairman Mrs. Joseph Shanks

REGISTRATION AND CREDENTIALS

Chairman Mrs. John W. Koenig
Co-Chairman Mrs. Edward G. Warnick
Mrs. J. J. Borke Mrs. Samuel K. Lewis
Mrs. Paul Carstens Mrs. George F. Lull
Mrs. M. W. Chudwin Mrs. Michael G. Maitino
Mrs. Henry Christiansen Mrs. Alfred Pagano
Mrs. R. C. Dunseth Mrs. Joseph M. Ruda
Mrs. V. E. Englemann Mrs. Kenneth Stegman
Mrs. Murray Fuchsmann Mrs. Roy T. Sugars
Mrs. B. M. Johnson Mrs. S. D. Swiontkowski
Mrs. J. J. Klabacha Mrs. Khan Zia

MEMORIAL SERVICE

Chairman Mrs. Matthew E. Uznanski

HOSPITALITY

Chairman Mrs. Frederick J. Roos
Co-Chairmen Mrs. Robert E. Dunlevy
Mrs. Joseph L. Lundholm

Mrs. Kenneth Keeton
Mrs. Howard D. Stuckey
Mrs. E. F. Dettmann
Mrs. R. J. Simonetta
Mrs. Thomas W. Kelso, Jr.
Mrs. Paul Hagen
Mrs. John F. Hubbard
Mrs. Sherman C. Arnold
Mrs. D. J. Ladd
Mrs. I. Erlin Bartlett
Mrs. Paul Fleener
Mrs. P. C. Rumore
Mrs. Paul Schmidt
Mrs. Benjamin Komasa
Mrs. William G. Gillies
Mrs. Robert B. White
Mrs. H. P. Swartz
Mrs. Milo Reed
Mrs. Robert Robbins
Mrs. William Shaw

Mrs. Louis Levin
Mrs. Charles R. Bardwell
Mrs. Raymond E. Baxter
Mrs. F. R. Martin
Mrs. LeRoy Rubright
Mrs. Noland W. White
Mrs. Wilbur A. Miller
Mrs. M. Thomas Gorsuch
Mrs. W. J. Mencarow
Mrs. William E. Knaus
Mrs. J. D. Belleville
Mrs. Frank P. Skaggs
Mrs. John Holman
Mrs. Samuel H. Bess
Mrs. Adam Slaw
Mrs. John Curtis
Mrs. John L. Hoyt
Mrs. W. L. Stitzel
Mrs. Ernest J. Kreutzer
Mrs. John F. McKeage

FAVORS

Chairman Mrs. Leonard J. Houda

HOUSE

Chairmen Mrs. Sherman C. Arnold
Mrs. Joseph Cari

PAGES

Chairman Mrs. Michael G. Maitino
Mrs. Leonard Brodt Mrs. Nicholas Mennite
Mrs. Joseph P. Cangelosi Mrs. Albert L. Sheetz
Mrs. Ephraim A. Grier Mrs. Mitchell A. Spellberg
Mrs. Samuel Heller Mrs. Fred A. Tworoger
Mrs. Paul Hletko Mrs. Edward A. Zencka
Mrs. Frank P. Kraft Mrs. Fernly C. Johnson
Mrs. Milton E. Kurth
Mrs. Paul McDaniel

INFORMATION

Chairman Mrs. Thaddeus J. Jasinski
Co-Chairman Mrs. Peter J. Giannini
Mrs. William Knapp Mrs. Joseph Stuart
Mrs. Nathaniel Baskind Mrs. Abraham Schultz
Mrs. A. L. Sluzynski Mrs. Nicholas Bruno
Mrs. Adolph J. Jarosz Mrs. John Casciato
Mrs. Henry Lewandowski

COURTESY AND RESOLUTIONS

Chairman Mrs. Edward G. Warnick
Mrs. Warren W. Young
Mrs. Willard Scrivner

ELECTION

Chairman Mrs. Willard Scrivner
Mrs. Walter Shriner Mrs. C. P. Siegel
Mrs. N. A. Thompson Mrs. William E. Knaus
Mrs. E. S. Frazier

TIMEKEEPERS

Chairman Mrs. H. Kenneth Scatliff
Mrs. H. Close Hesselstine
Mrs. C. Paul White

READING

Chairman Mrs. Wendell Roller
Mrs. Sherman C. Arnold
Mrs. B. Smith Hopkins, Jr.

REVISIONS

Chairman Mrs. Robert E. Dunlevy
Mrs. Matthew E. Uznanski
Mrs. Albert T. Kwedar

REFERENCE

Chairman Mrs. Nicholas Chester
1. Reports of Officers & Directors .. Mrs. Henry Christiansen
2. Reports of Standing Committees . Mrs. Albert T. Kwedar

TICKETS

Chairman Mrs. Harold Dubner
Co-Chairman Mrs. Edward C. Helfers
Mrs. William F. Bartelt Mrs. Ephraim A. Grier
Mrs. A. F. Montezon Mrs. Frank P. Kraft
Mrs. Roland Loring Mrs. Alfred L. Pagano
Mrs. Mitchell A. Spellberg

INSTALLATION OF OFFICERS

..... Mrs. Henry L. Schmitz

CONTINENTAL BREAKFAST

Chairman Mrs. Frederick J. Roos
Co-Chairman Mrs. Robert E. Dunlevy
Mrs. Joseph S. Lundholm

LUNCHEON, Tuesday

Chairman	Mrs. Carl Hagler
Mrs. Kenneth Keeton	Mrs. Roger Clarke
Mrs. Newton DuPuy	Mrs. James Cravens
Mrs. Guy Tournay	Mrs. Carl Pfeiffer
Mrs. Raymond Holben	Mrs. Carl Rylander
Mrs. Aldo Germann	Mrs. Robert Murphy
Mrs. Walter Whitaker	Mrs. J. F. Ross

LUNCHEON, Thursday

Chairman	Mrs. Ward Eastman
Mrs. Dan F. Anderson	Mrs. Elliot Burt
Mrs. Thomas Gorsuch	Mrs. Wm. Blender, Jr.
Mrs. Howard R. Miller	Mrs. Dan Morse
Mrs. Alton S. Hansen	Mrs. Leonard H. Harris
Mrs. Howard A. Lowy	Mrs. Robert Hart
Mrs. Paul T. Palmer	

25

**Did you notice there are
to be 25 Scientific Exhibits
at the Annual Meeting?
Read about this valuable
information available to
you, starting on page 298.**



The Annual Check-Up

YOU and I are well aware of the value of an annual health check-up. We recognize that such a periodic survey aids greatly in detecting serious medical problems while they still are in an incipient stage and amenable to sound therapy. The same principle should hold true concerning our finances. Wouldn't it be wise to examine your purse critically, ascertain the facts from a monetary standpoint, and then budget for the coming year and for the near future?

Every corporation issues an annual report, showing the financial result of the year's activities and presenting a summary of the corporation's assets and liabilities. At one glance the company's financial state can be recognized. The president usually summarizes the past year's activities, presents a budget for the following year, and attempts to show what results to expect during the next twelve months. Usually he completes the picture with a prognosis for business and his industry in general and his own corporation in particular.

Shouldn't you do the same? Of course, as professional men our concern is with our patients, research problems, teaching, hospital, and our medical organizations. But since we are the sole determinants of our family finances it is imperative to know where you stand and what the future may hold. A yearly audit is a relatively simple way to observe the guideposts toward financial security, so as to avoid unpleasant detours and dead ends.

How do we proceed? A complete financial audit will demand the attention and minds of several specialists. Even though you are getting expert advice, the ultimate decisions will be yours. It's just like medical advice. You examine and then advise surgery, if you think it is needed. The decision to have surgery is up to the patient. So be ready to get financial advice but sift the information and then make your own decision.

The best place to start is with your family—your wife and your children. Your goals, needs, and ambitions should be considered for the family as a unit. After all, the accumulation of money is to enable you to enjoy gracious living with your loved ones. It's always healthy to review your philosophy and objectives in life before commencing the financial review.

Now it's time to call in the experts. Let's start with the accountant. In the first place let's make certain he knows his business. He must be a certified public accountant (CPA), to say the least. Above that, choose him just as you would a physician, lawyer, or broker. Check on what he has done, what he's doing, his character, personality, and ability to serve you. A good start is to have him prepare your income tax report. A good accountant is not the one who finds the most deductions or helps you pay the lowest possible tax but is the one who shows you the road to good bookkeeping and accounting methods, how to save proper receipts, and who knows the income

tax laws as to what deductions are and are not allowable as business expenses.

Your accountant will help you keep accurate records of all income and expenses. He can show you where you earn your income and how it is spent. He supplies factual information that tells you where you are and where to go, from the standpoint of better finances. He can point out many avenues of improvement. Your office overhead may be too great or too little; there may be areas whereby you can save money by better buying methods. You may even note that your obstetrical practice is not financially sound. A few good night's sleep would help you spiritually but in addition the time devoted to hospital deliveries might be a financial loss in comparison to the time you could spend in your office.

Many good points can be brought out by a study of your yearly financial record. Remember how the clinical pathological conference helps you. You survey the clinical protocol and listen to the pathologist. Then you see how you could have made a more accurate diagnosis and how treatment could have been bettered. This helps you on the next case. You'll find this financial audit a similar undertaking.

Now let's consider your insurance man (broker is the proper term). As life marches on, your insurance needs change. Anything and everything can be insured: your life, health, house, car, Mama's fur coat, daughter's contact lenses, the neighbors' house from your boy's baseball bat, the mailman from your dog, and your wallet from holdup men. The problem is to have enough insurance of the right kind at the right time,

without being insurance poor. This necessitates a free discussion with an insurance broker who is adept at advising a program tailored to fit you. This needs constant review as the family situation and your personal needs change. A yearly insurance audit will keep you on the right track.

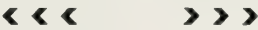
Now we go to the investment counselor. This may be an investment counselor per se or your broker, your banker, or an investment counseling service. Since you are a physician, making long range investments, and not a speculator or one whose living is made by trading in stocks, bonds, or real estate, an annual visit is adequate. To go for this advice more often is to be tempted to speculate or become a trader. To go less often is unsound, as economic atmospheres change from time to time. Such a review will keep your investments up to date regarding current trends in business and industry.

An attorney is consulted as a will is a necessity. While it must be up to date, it need be changed only when family or financial circumstances are altered. This may not be on a yearly basis but why not visit him once a year? You both have much in common and he can decide when changing the will is necessary.

After all this consultation call a family gathering to review your goals, glance at the financial statistics, and discuss plans for the years ahead.

"Let's look at the record" has always been a sound political slogan, a medical axiom, good business sense, and the foundation whereby you can place your philosophy into action.

J. R. W.



CORRESPONDENCE



AMA annual meeting to be held in Atlantic City

Some 15,000 physicians will gather in Atlantic City, June 8-12, for the 108th annual meeting of the AMA. The meeting also will be attended by residents, interns, nurses, technicians, students, and physicians' wives and members of their families.

Physicians will have an opportunity to catch up on hundreds of aspects of a rapidly-changing medical world. This information will be presented in the form of scientific exhibits, lectures, motion pictures, panel discussions, televised surgical procedures, and industrial exhibits.

New medical research findings and methods of handling daily medical problems will be reported by 500 speakers in scientific papers or participation in symposium and discussion groups. There will be more than 300 scientific exhibits and a similar number of industrial exhibits on display at Convention Hall.

The House of Delegates will meet throughout the week in the Traymore Hotel, headquarters for the meeting. First order of business will be the selection of a physician to receive one of medicine's highest honors—the Distinguished Service Award. He will be chosen from three persons, whose names are submitted by the Board of Trustees.

The opening session will be addressed by Dr. Gunnar Gundersen, La Crosse, Wis., outgoing

president, and his successor, Dr. Louis M. Orr, Orlando, Fla. A president-elect to serve one year will be chosen during the meeting.

The annual film program will be highlighted by the presentation of 60 medical motion pictures.

The Woman's Auxiliary to the AMA will hold its meeting Tuesday through Thursday at Chalfonte-Haddon Hall.

Other sidelights of the meeting will be the special art exhibits, including that of the American Physician's Art Association, and the 43rd annual American Medical Golfing Association tournament.

For advance hotel and meeting registration information, write to the Convention Services Department, AMA, 535 North Dearborn Street, Chicago 10.

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Postgraduate tour to Hawaii

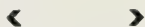
The University of Southern California School of Medicine will offer another postgraduate refresher course in Hawaii and on board the S. S. Lurline from July 29 through August 15.

There will be lectures, workshops in ECG and X-ray interpretation, problems of water and electrolyte balance, and the differential diagnosis of jaundice.

Information may be obtained from the director of the Postgraduate Division, USC School of Medicine, 2025 Zonal Avenue, Los Angeles 33.

Geriatric medicine course

Washington University School of Medicine, Division of Gerontology, will conduct its third annual postgraduate course in geriatric medicine in St. Louis, May 21-23. The course will put emphasis on heart disease and the psychosocial problems of later life. Clinical applications will be stressed. The course is tuition free, with category I credit to members of the American Academy of General Practice.

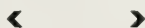


I.C.S. plans postgraduate tour of Europe in summer

The International College of Surgeons will conduct a midsummer postgraduate tour. Dr. Ross T. McIntire, Chicago, executive director of the College, will be the co-ordinator. Visits will be made to The Netherlands, Denmark, Norway, Sweden, Finland, Russia, Austria, Germany, and France.

Departures will be from New York July 17 on the S. S. Nieuw Amsterdam or by plane July 24. Tour participants will take in the Amsterdam meeting of the I.C.S., July 25-26, and the Helsinki meeting, August 8-9; spend three days in Leningrad, August 11-13, and three days in Moscow, August 15-17; and meet with fellows of the I.C.S. in Vienna, August 19-20. Return to New York will be August 27 by plane and September 2 by boat.

For further information, write Dr. Ross T. McIntire, International College of Surgeons, 1516 Lake Shore Drive, Chicago 10.



Twenty clinics for crippled children listed for June

Twenty clinics for Illinois' physically handicapped children have been scheduled for June by the University of Illinois, Division of Services for Crippled Children. The Division will count fourteen general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical, social, and nursing service. There will be two special clinics for children with cardiac conditions, two for rheumatic fever, and two for cerebral palsied children. Clinicians are selected from among private physicians who are certified Board members. Any

private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

June 3 — Carmi, Carmi Township Hospital

June 3 — Hinsdale, Hinsdale Sanitarium

June 3 — Salem, Masonic Temple

June 5 — Chicago Heights (Cardiac), St.

James Hospital

June 9 — East St. Louis, St. Mary's Hospital

June 9 — Peoria, Children's Hospital

June 11 — Springfield, St. John's Hospital

June 12 — Evanston, St. Francis Hospital

June 16 — Belleville, St. Elizabeth's Hospital

June 17 — Alton (Rheumatic Fever), Alton

Memorial Hospital

June 17 — Chicago Heights, General, St.

James Hospital

June 17 — Vandalia, America Legion Home

June 18 — Elmhurst (Cardiac), Memorial Hospital of Dupage County

June 18 — Rockford, St. Anthony's Hospital

June 23 — Effingham (Rheumatic Fever), St.

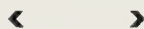
Anthony Hospital

June 23 — Peoria, Children's Hospital

June 24 — Elgin, Sherman Hospital

June 24 — Springfield (Cerebral Palsy), Memorial Hospital

June 25 — Bloomington a.m. (General), p.m. (Cerebral Palsy), St. Joseph's Hospital



Annual Meeting of the Illinois Society of Anesthesiologists

Sunday, May 17, 1959

Sherman Hotel—Old Chicago Room

9:00 A.M. Registration

9:30 A.M. Panel Discussion—"Fluothane"

Moderator: Richard E. Lyons, M.D., Chicago, Ill.

Speakers: John Abajian, M.D., Burlington, Vt.

"Precise Vaporization and Measurement of Fluothane Concentrations."

Charles B. Pittinger, M.D., Iowa City, Iowa

"Cardiovascular Effects of Fluothane."

C. R. Stephen, M.D., Durham, N. C.

"Fluothane in Pediatric Anesthesia".

Harold L. Harris, M.D., Evanston, Ill.

"Fluothane in Closed Absorption Anesthesia."

12:30 P.M. LUNCHEON. Gold Room, Hotel Sherman

2:00 P.M. OLD CHICAGO ROOM

Speaker: Henry K. Beecher, M.D., Boston, Mass.
"Pain."

Business meeting to follow scientific session

HUBERTA LIVINGSTONE, M.D., President
CLIFFORD A. BALDWIN, JR., M.D.

Secretary-Treasurer

522 Maple Ave., Wilmette, Ill.

ALpine 6-0158

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Special charter plane service to AMA meeting

Special charter plane service to the AMA meeting in Atlantic City, June 8-12, has been arranged with the United Air Lines.

Four engine mainliners will leave Chicago Midway Airport at noon on June 6 and 7 and fly nonstop to Navy Airport, Atlantic City. These will be regularly scheduled flights meeting all insurance requirements, and will be first class only. Fare each way will be \$52, with no half fares or family plan. Return flights will leave Atlantic City at 6 p.m., June 12. Meals will be complimentary.

Reservations should be made early. For information, write to Dr. Elmer V. McCarthy, 25 East Washington Street, Chicago 2.

Crippled children program

Practical approaches to the problems of Easter Seal societies will be considered at the annual convention of the National Society for Crippled Children and Adults, to be held at the Palmer House, Chicago, November 29-December 2.

The sessions will depart from the established format of previous conventions in that there will be workshops devoted to all facets of Easter Seal activity.

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Chicagoan will co-ordinate I.C.S. world P.G. tour

Dr. Edward L. Compere, Chicago, president of the United States Section, International College of Surgeons, will be the co-ordinator of medical activities on the fourth I.C.S. around-the-world postgraduate refresher clinic tour in the late fall.

Departures will be by plane from San Francisco, October 10. Participants will take in specially arranged meetings of the I.C.S. Sections in Tokyo, Hong Kong, Bangkok, Tel Aviv, Istanbul, and Athens. Other countries to be covered include Thailand, India, Ceylon, Egypt, Lebanon, and Jordan. Return to New York will be about December 1.

For information, write to the Secretariat, International College of Surgeons, 1516 Lake Shore Drive, Chicago 10.

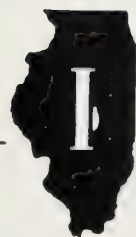
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Tuberculosis societies to meet in Chicago

The annual meetings of the National Tuberculosis Association, American Trudeau Society, and National Conference of Tuberculosis Workers will be held in the Palmer House, Chicago, May 24-29.

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AT THE EDITOR'S DESK



NEWBORN'S VISION

Drs. Sydney S. Gellis and John Gorman, of Boston University School of Medicine, found that newborn babies are not almost blind at birth. They have essentially 20-400 vision.

They used an apparatus that works on a principle known as "railway nystagmus." This refers to the eye movements of people watching telephone poles through the window of a moving train. As the poles go by the passenger's eyes follow each pole as it moves by and then flash back to pick up the next pole as it comes into view.

The infant is placed between rolls of paper containing alternatively black and white lines. They are set in an arc-shaped device that covers the infant's entire field of vision. By gradually reducing the width of the lines and watching the infant's eye movements, the physician can determine which size lines the infant sees. Visual acuity is calculated from these observations.

NEW CENTER

The first heredity counseling center was established at the University of Michigan recently. Geneticists believe now that knowledge of human inheritance has developed to the point at which heredity counseling can be of valuable aid to clinical medicine.

DRIVING PERFORMANCE

The Cornell Aeronautical Laboratories have

a new research tool, the automobile driving simulator, that measures and records the actions and reactions of a person when driving a car. They hope it will shed light on the effects on driving performance of various drugs and medications as well as on the role of a variety of physical conditions such as diabetes and epilepsy. The nature and cause of fatigue in driving will be studied as well as the reactions of drivers to various emergency and high risk situations.

The driver being studied sits at the wheel of a standard car, surrounded by a television screen. The TV cameras photograph a miniature movie set on which models of cars and pedestrians move according to a pattern established by electronic computers. Life size moving objects are projected onto the screen around the driver.

As he operates the car the sensations of speeding up, swerving, and other simulated conditions are reproduced visually on the screen. The drivers' reactions during the critical seconds before a simulated accident can be studied to obtain information on the effects of such variables as alcohol, anger, and fatigue.

SYNTHETIC PROTEIN

A synthetic protein was made by two chemists at the Florida State University. It closely resembles natural protein in chemical behavior and is readily attacked by meat tenderizers. The new product is being studied as a possible future source for synthetic food. The chemists hope to

produce "proteins of superior nutritional quality by inclusion of high proportions of lysine, tryptophan, or methionine, which often are the essential amino acids lacking in foods."

VOX POP

A University of Michigan survey showed that if Americans had to choose between spending money for medical research or putting the first man on the moon, they would give their dollars to physicians and medical scientists. A random sample of 1,500 adults were asked which of four scientific projects they would favor if money were available for only one. Medical research received 54 per cent of the votes, new approaches to juvenile delinquency 32 per cent, basic research in physical sciences seven per cent, and putting a man on the moon three per cent.

TB ITEMS

Hypnotism was used as an anesthetic in giving bronchograms to 13 patients at Mairdale Sanatorium in Milwaukee. It was successful in 11. The idea of using hypnosis instead of anesthesia was conceived because it is difficult to get X-rays of the bronchus if the patient coughs.

A popularity study conducted among patients in 19 VA hospital RB wards revealed that the "best doctor" was the physician who spends a great deal of time talking with and examining them.

The National Tuberculosis Association reported that there were 3,604 fewer new cases of tuberculosis in 1957 than in 1956. This represents a decrease of 4.0 per cent. Statistics in 1958 will not be available for many more months.

PHARMACEUTICALS

Erythromycin propionate (Ilosone — Lilly) is superior to the older erythromycin. It is intended only for oral administration and is a valuable addition to the list of important antibiotics, producing blood levels about three times as high as the same dosage of erythromycin. Peak levels are reached earlier and persist longer, which means that satisfactory clinical results should be achieved by giving smaller doses at longer intervals. Apparently Ilosone does not cause the gastrointestinal irritation so frequently associated with older erythromycin.

Ilosone is effective against gram positive coccal

organisms such as staphylococci, pneumococci, and Beta hemolytic streptococci. It also acts against a number of gram-negative bacteria, such as gonococci, meningococci, *Hemophilus influenza*, and *Hemophilus pertussis*. It has been reported to be effective against 80 per cent of coagulase-positive strains of *Staphylococcus aureus*.

Methahexamide (Melanex) is Lilly's new experimental oral hypoglycemic agent. The company expects to continue its clinical evaluation until the product has been tested on several thousand diabetics. The experiences to date show that Melanex is more active as regards daily dose requirements than other drugs of the same class. Side effects have been noted. More time will be needed to evaluate this product thoroughly.

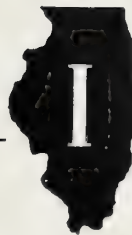
Tetravax (Merck, Sharp & Dohme) is a combination of four vaccines and toxoids to provide protection against diphtheria, whooping cough, tetanus, and poliomyelitis. For maximum protection, three injections of Tetravax are recommended at monthly intervals with a fourth injection 6 to 12 months later.

Synthetic penicillins are in the offing. Commercial products are not yet available but Bristol Laboratories and Beecham Group Ltd. have signed agreements to pool their know how in the development of these agents.

Time answers many questions. Decadron and Deronil were reported originally to have fewer and milder toxic side effects than the older adrenal steroids. A recent study by Slater et al. (*Lancet* 1:173 (Jan. 24) 1959) showed that these products produced potassium and nitrogen losses and exacerbation of glycosuria in diabetes, to the same extent as other adrenal steroids.

Dr. George Crile, Jr. reported recently in *World Wide Abstracts of General Medicine* that thyroid hormone has replaced iodine as the treatment of choice in goiter. His findings were based on the treatment of 300 patients with small or medium sized nodular goiters who received from two to three grams of thyroid daily. In the majority, the goiters grew smaller and in some instances, returned to normal size. No further enlargement occurred except in one individual.

NEWS of the STATE



ADAMS

MEETING. Dr. Nobel Correll, assistant professor of surgery, University of Chicago, spoke on "Thoracic Tumors," at the April meeting of the Adams County Medical Society.

COLES-CUMBERLAND

POSTGRADUATE MEETING. The Coles-Cumberland County Medical Society was host April 2 to physicians from Champaign, Clark, Crawford, Douglas, Edgar, Effingham, Jasper, Macon, Moultrie, Piatt, Shelby, and Vermilion counties at a postgraduate conference held at the Mattoon Golf and Country Club. The conference has been arranged by the Illinois State Medical Society's Committee on Postgraduate Medical Education and Scientific Service.

Four physicians and surgeons from the University of Illinois College of Medicine presented a program on cancer. The four speakers were: Drs. David Lochman, William G. Slate, Charles Perlia, and Gerald O. McDonald, all of Chicago. Drs. Edward N. Zinschlag, Frederick M. Reis, and Wayne T. Neal, all of Mattoon, were discussion leaders.

MATTOON POSTGRADUATE CONFERENCE. Dr. William H. Schowengerdt, Champaign, Postgraduate Medical Education and Scientific Service committee member of the ISMS, presided at the afternoon session. Dr. Lewis Adkins, Charleston, President of the Coles-Cumberland County Medical Society, presided at the dinner

meeting. The dinner speakers were Dr. Harry W. Southwick, Chicago, and Dr. Harlan English, Danville, councilor of the eighth district of the Illinois State Medical Society.

Wives were guests of the Woman's Auxiliary at a luncheon in the Hotel U. S. Grant, followed by bridge. They also were invited to attend the evening meeting.

COOK

MEETING. The program for the April meeting of the Chicago Gynecological Society was: "Experiences with Closure of the Incompetent Cervix During Pregnancy," by Dr. Robert H. Barter, professor of obstetrics and gynecology, George Washington University School of Medicine, and "The Effect of Anoxia During Labor and Immediately Following Birth on the Subsequent Development of the Child," by Drs. Beatrice E. Tucker and Harry B. W. Benaron. The clinical meeting was held at Michael Reese Hospital.

NEWS. Dr. Max Sadove, Oak Park, professor of surgery and head of anesthesiology at the Chicago Professional Colleges of the University of Illinois, is one of five surgeons on an emergency volunteer mission to battle a wave of tuberculosis in Viet Nam. The group of chest surgeons and anesthesia specialists will demonstrate methods of treating lung diseases.

Ground has been broken for the new Dr. Ernest E. Irons clinic of the Municipal Tuber-

culosis Sanitarium at 3525 S. Michigan Ave., Chicago. The 17,000 square foot structure will be capable of caring for 25 per cent of the tuberculosis patients of Chicago. The clinic is named for Dr. Irons, who was president of the Municipal Tuberculosis Sanitarium for 12 years who died recently.

Dr. Jerome Brosnan, attending radiologist at Cook County Hospital and on the faculty of Stritch School of Medicine, has been appointed director of the department of radiology and radioactive isotopes at Little Company of Mary Hospital.

Dr. Peter C. Kronfeld was appointed professor and head of the Department of Ophthalmology, University of Illinois College of Medicine. He also was named ophthalmologist-in-chief of the University of Illinois Hospital and the Illinois Eye and Ear Infirmary.

Mr. and Mrs. Herbert Zornow, Dolton, Illinois gave a grant of \$46,000 to the University of Chicago, Department of Obstetrics and Gynecology, through the National Association for Retarded Children for expanded research in reproductive and fetal pathology. The grant was given in memory of the Zornow retarded baby who died at 7 months of age.

Robert Lynn Parker, Hollansburg, Ohio, is the winner of the Frederick H. Rawson, Jr. scholarship for the outstanding sophomore student at Northwestern University Medical School. The scholarship fund was established by the Rawson family of New York City, former residents of Lake Forest, in memory of their son, a graduate of Northwestern.

The four-year-old Rehabilitation Institute, 401 East Ohio St., Chicago is the recipient of a gift of \$100,000. from an anonymous donor to aid physically handicapped persons.

Dr. John I. Brewer, professor of obstetrics and gynecology, Northwestern University Medical School, was installed as president of the American College of Obstetricians and Gynecologists at their annual clinical meeting.

Dr. Lloyd G. Stevenson, professor of the history of medicine and dean of the faculty of medicine, McGill University, spoke on "The Early Development of Internal Medicine in the United States," at the University of Illinois College of Medicine for the sixteenth annual D. J. Davis Lecture on Medical History.

MEETINGS. The April meeting of the Chicago

Society of Internal Medicine had the following program presented by the Residents of Chicago Hospitals: "Analysis of 90 Patients with Ipro-niazid (Marsalid) Jaundice," Leigh E. Rosenblum, Roy J. Korn, and Hyman J. Zimmerman, Chicago Medical School; "Behavior of Leukemic Cells in Tissue Culture as a Diagnostic Aid," M. P. Farnes, Presbyterian-St. Luke's Hospital, "Chronic Sodium Chloride Challenge Studies in Man," Ernest G. Warner, Jr., Robert W. Alexander, and David Baldwin, Presbyterian-St. Luke's Hospital; "A Clinic and Physiologic Study of 57 Cases of Pulmonic Valvular Stenosis with Intact Ventricular Septum," R. A. Foley, A. W. Holmes, J. S. Graettinger, and J. A. Campbell, Presbyterian-St. Luke's Hospital.

The annual meeting of the Chicago Urological Society was held in April. The program was "Polycythemia and its Relationship to Urology," James C. Valenta, (Candidate's thesis); "Office Management of the Infertile Male," Raymond Firfer, (Candidate's thesis); "Sarcoma of the Urethra," Frank J. Jirka, (Candidate's thesis); and the presidential address by George O. Baumrucker on "Transurethral Prostatic Resection; Technique, Pitfalls, and Complications."

The Chicago Neurological Society's April meeting discussed "Epilepsy is One," Roland P. Mackay; "Quantitation of Tone, Tremor, Voice, and Movement in the Normal and in Parkinsonism," Benjamin Boshes, Hirsch Wachs, Joel Brumlik, Manuel Mier, and M. Petrovic; and "Optic Neuritis as a Neurosurgical Problem," Nicholas Wetzel.

DEKALB

MEETING. Dr. Samuel Bluefarb, associate professor of dermatology, Northwestern University Medical School presented "Skin Manifestations of Internal Diseases," at the March meeting of the DeKalb County Medical Society. The Woman's Auxiliary met with the physicians.

DEWITT

MEETING. Dr. Jacob E. Reisch, Springfield presented lapel emblems of the Fifty Year Club to Drs. W. R. Marshall and J. E. Marvel at the April meeting of the DeWitt County Medical Society.

EDGAR

MEETING. Dr. Grady W. Phillips, Paris, spoke

on "Care of the Pregnant Woman in Labor," at the April meeting of the Edgar County Medical Society.

GREENE

MEETING. A scientific program of movies was given at the March meeting of the Greene County Medical Society.

KANE

MEETING. Attorney General Latham Castle gave a "Presentation of Medical Testimony," at the April meeting of the Kane County Medical Society.

KNOX

MEETING. Mr. Roger Peterson, business consultant, spoke on "The Business Side of Medicine," at the April meeting of the Knox County Medical Society.

LAKE

POSTGRADUATE MEETING. The care of diabetic patients was discussed April 8 by five medical educators from Chicago. The occasion was a postgraduate conference at Hank's Supper Club, arranged by the Illinois State Medical Society's Committee on Postgraduate Medical Education and Scientific Service. The Lake County Medical Society was host. Physicians from Boone, DeKalb, Kane, Lake, McHenry, Ogle, Winnebago, and DuPage counties attended.

The speakers were Drs. James B. Hurd, Donald I. Bell, Harley E. Cluxton, Jr., and Roger W. Friskey from Northwestern University Medical School, and Henry A. Wildberger, from the University of Chicago School of Medicine. Dr. J. H. Maloney, Rockford, Postgraduate Medical Education and Scientific Service committee of the Illinois State Medical Society, presided at the afternoon session and Dr. Sidney J. Kaplan, Waukegan, president of the Lake County Medical Society, at the dinner meeting. The dinner speakers were Mr. Louis Cheskin, Chicago, director, Color Research Institute, and Dr. Carl E. Clark, councilor of the first district of the Illinois State Medical Society.

LASALLE

MEETING. Dr. Stephen E. Reid, assistant pro-

fessor of surgery, Northwestern University Medical School, discussed "The Colon," at the April meeting of the LaSalle County Medical Society.

MACOUPIN AND MONTGOMERY

MEETING. At the joint meeting of Macoupin and Montgomery County Medical Societies in March, Dr. Robert Paine, cardiologist, Washington University School of Medicine, St. Louis spoke on "Recent Advances in Electrocardiography."

LEE AND WHITESIDE

Dr. Miles J. Gullickson, Rockford spoke on "Chest Trauma," at the April meeting of the Lee and Whiteside County Medical Societies.

MADISON

MEETING. Dr. William G. Klingberg, St. Louis, spoke on "Turkey: The Crossroads of the Middle East. The Country and Its Medical Problems," at the April meeting of the Madison County Medical Society.

MARION

POSTGRADUATE MEETING. The Marion County Medical Society was host in April to physicians from Fayette, Effingham, Clay, Wayne, Jefferson, Hamilton, Washington, Clinton, and Bond counties at a postgraduate conference held at St. Mary's Hospital. The conference has been arranged by the Illinois State Medical Society's Committee on Postgraduate Medical Education and Scientific Service.

The afternoon program was presented by four Chicago physicians, Drs. George V. Byfield and Vincent C. Freda of the University of Illinois College of Medicine, Caesar Portes of the Chicago Medical School, and I. E. Schapiro of the Municipal Tuberculosis Sanitarium. Drs. W. W. Davidson and Max Hirschfelder of Centralia, and L. P. Basch of Patoka, were discussion leaders. Dr. Max Hirschfelder of Centralia, Postgraduate Medical Education and Scientific Service Committee member, presided.

CENTRALIA POSTGRADUATE CONFERENCE. The dinner speakers were Drs. Ray Lavender and John Arnold, both from the University of Chicago School of Medicine. Dr. Arthur F. Goodyear of Decatur, councilor of the seventh district

of the ISMS, also spoke. Dr. W. W. Davidson of Centralia, president of the Marion County Medical Society, presided.

The Marion-Clinton Woman's Auxiliary entertained wives of the physicians at a reception and tour of St. Mary's Hospital, followed by a card party. They also were invited to the dinner, after which they viewed the film, "M.D. International."

McLEAN

MEETING. Dr. John C. Herweg, department of pediatrics, St. Louis Children's Hospital, spoke on "Cystic Fibrosis of the Pancreas," at the April meeting of the McLean County Medical Society.

McDONOUGH

MEETING. The March meeting of McDonough County Medical Society showed "Diabetes Mellitus," a Grand Rounds film.

MONTGOMERY

MEETING. The April meeting of the Montgomery County Medical Society was held at St. Francis Hospital.

PEORIA

MEETING. Dr. William Dameshek, New England Center Hospital, Boston, spoke on the "Present Status of Leukemia," at the April meeting of the Peoria Medical Society.

PIKE

MEETING. Pike County Medical Society held its April meeting at Barry.

ROCK ISLAND

POSTGRADUATE MEETING. The Rock Island County Medical Society was host April 22 to physicians from Henderson, Henry, Knox, Mercer, Rock Island, Warren, and Whiteside counties at a postgraduate conference held at The Plantation, Moline. The conference was arranged by the Illinois State Medical Society's Committee on Postgraduate Medical Education and Scientific Service.

Four physicians and surgeons from Loyola University Stritch School of Medicine, Chicago, presented a program on cancer. The speakers were: Drs. George W. Ferenzi, John J. Brosnan, Robert L. Schmitz, and James A. Rooney. Dr.

Norbert C. Barwasser, Moline, Postgraduate Medical Education and Scientific Service Committee member of the Illinois State Medical Society, presided. Dr. John Roane, Moline, President of the Rock Island County Medical Society, presided at the dinner meeting. The speaker was Dr. Fred C. Endres, Peoria Heights, councilor of the fourth district of the Illinois State Medical Society. There also was a film presentation.

The wives of the physicians were guests at the evening meeting and there was entertainment for the wives in the afternoon.

ST. CLAIR

MEETING. The ranking officers of the United States Air Force took part in a discussion of "Space Medicine," at the April meeting of St. Clair County Medical Society held at the Scott Field United States Air Force Hospital.

SANGAMON

MEETING. Dr. Frank McDowell, St. Louis discussed "Cancer of the Face, Mouth, and Jaws," at the April meeting of the Sangamon County Medical Society.

UNION

MEETING. The April meeting of the Union County Medical Society was held at Union County Hospital.

VERMILION

MEETING. Dr. Edwin C. Graf, chief of urology, Presbyterian-St. Luke's Hospital, spoke on "Progress in Urology," at the March meeting of the Vermilion County Medical Society.

WARREN

MEETING. Dr. Fred C. Endres was the speaker at the April meeting of the Warren County Medical Society.

WASHINGTON

MEETING. Drs. W. W. Fullerton and Andy Hall presented 50 year pins to Drs. Roscoe C. Vernor and Karl W. Eirich at the April meeting of the Washington County Medical Society.

WILLIAMSON

MEETING. The April meeting of the William-

son County Medical Society was held at the Marion Motel, Marion.

WINNEBAGO

MEETING. The second annual community meeting of the Winnebago County Medical Society was held in April. Mr. DeLoss Walker talked on the restoration of local and state government. Mr. Walker has gained national recognition through work and travels, and the county medical society believes a meeting of this type fosters good public relations for the medical profession.

GENERAL

"YOUR HEALTH COMES FIRST" OVER RADIO CHICAGO WJJD

MAY 27 AT 9:15 P.M.: EDWIN F. HIRSCH, associate professor of pathology, University of Chicago School of Medicine, "Why An Autopsy?"

JUNE 24 AT 9:45 P.M.: PAUL K. WEICHSELBAUM, clinical associate professor of dermatology, University of Illinois College of Medicine, "Care of the Skin in Summer."

LECTURES ARRANGED BY THE ILLINOIS STATE MEDICAL SOCIETY:

WALTER L. OBLINGER, associate counsel, Illinois State Medical Society, addressed a joint meeting of the Will-Grundy County Medical Society with the lawyers of the county in Joliet, April 7, on "Medical Legal Problems."

EDWARD W. KLINK, chairman of the department of obstetrics and gynecology, Rockford Memorial Hospital, addressed the Stephenson County Medical Society in Freeport, April 16, on "Endocrine Management in Obstetrics and Gynecology."

H. CLOSE HESSELTINE, Mary Campau Ryerson professor of obstetrics and gynecology, University of Chicago School of Medicine, addressed the Pre-Medical Club at the University of Chicago, April 21, on "The Role of the Physician in Society."

LAWRENCE BRESLOW, clinical assistant professor of pediatrics, University of Illinois College of Medicine, addressed the Melzer School Parent Teacher Association, May 11, on "Physical and Emotional Problems of the School Age Child."

DEATHS

ISRAEL BECKER*, Chicago, who graduated at

Dalhousie University Faculty of Medicine, Halifax, in 1927, died March 10, aged 59. He was a member of the staff of Weiss Memorial Hospital.

VERN EDWARD CANNON, Decatur, who graduated at Chicago College of Medicine and Surgery in 1914, died January 6, aged 68. He was a member of the staff of St. Mary's Hospital.

JOHN H. GORMLEY*, Winnetka, who graduated at Northwestern University Medical School in 1927, died in an automobile accident, March 12, in Cleveland, Tenn. He was 59.

EMERY G. GRIMM*, Chicago, who graduated at Medizinische Fakultät der Universität, Wien, in 1921, died March 19, aged 64. He was an associate in medicine at Northwestern University Medical School, and a member of the staff of Chicago Wesley Memorial Hospital.

RICHARD ANTHONY HARTMANN*, Effingham, who graduated at Stritch School of Medicine of Loyola University in 1951, died in Hollywood, Calif., January 1, aged 35. He was past-president of the Effingham County Medical Society, and a member of the staff of St. Anthony Hospital.

PAUL E. KELLY*, Chicago, who graduated at Northwestern University Medical School in 1908, died March 28, aged 77. He was a member of the staff of the Ravenswood Hospital, and had practiced medicine on the northwest side for 50 years.

WESLEY W. KUNTZ*, Barry, who graduated at Northwestern University Medical School in 1905, died February 1, aged 84.

GEORGE A. LEWIS, Chicago, who graduated at Howard University College of Medicine, Washington, D. C., in 1899, died April 6, aged 83. He practiced medicine in El Paso, Tex., before moving to Chicago in 1908.

HARRY O. MARYAN*, Chicago, who graduated at the University of Illinois College of Medicine in 1924, died March 28, aged 63. He was a consultant and staff member at Columbus, American, Forkosh, Cuneo, and Augustana Hospitals.

HERMANN L. METZGER*, Chicago, who graduated at Universität Heidelberg Medizinische Fakultät, Baden, in 1925, died March 12, aged 57. He was a member of the Jackson Park and Michael Reese Hospitals.

JOHN H. MURPHY*, retired, Moline, who graduated at Northwestern University Medical School in 1906, died January 29, aged 82.

BERNARD E. SAYRE*, retired, Chicago, who

*Indicates member of the Illinois State Medical Society.

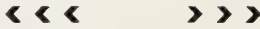
graduated at the University of Illinois College of Medicine in 1924, died March 30, aged 59. He was a former staff member of Mount Sinai and Walther Memorial Hospitals.

ARTHUR K. STANGLAND*, retired, Highland, Ind., formerly of Chicago, who graduated at the University of Illinois College of Medicine in 1905, died January 27. He was a member of the Fifty Year Club of the Illinois State Medical Society.

ALBERT O. STEPHENSON*, Chicago, who graduated at the Chicago Medical School in 1926, died March 28, aged 65. He had been a member of the staff of the Jackson Park Hospital for more than 15 years.

OREN HENRY WRIGHT*, Chicago, who graduated at Rush Medical College in 1912, died December 30, aged 73.

*Indicates member of the Illinois State Medical Society



Confidential

The question of confidentiality is very important. Although some companies feel management should have the report of the examination because management is paying the bill, most companies insist that the report of the physical examination be given directly to the executive himself. Nothing will detract more from high participation in an optional program than the suspicion that the examination is a device of management to obtain information regarding an individual. It frequently is thought of as an attempt to correlate performance with physical or emotional difficulties. What is even more feared is that management will be unable to interpret a report correctly and that in management's hands it will be an unfair obstacle to promotion. It has been axiomatic in the practice of medicine for hundreds of years that the doctor-patient relationship be considered inviolate. This attitude has been so strong throughout the development of English civil law that there has come down in the civil law of this country the concept that the doctor-patient relationship must be preserved.

Recently, I had a chance to review the attitudes of the courts over the past few years in regard to the confidential doctor-patient relationship. It is not surprising — in fact, it is reassuring to one reared in medicine — to find that over the years the courts have not been more

lenient in weakening the confidential relationship. On the contrary, each court decision over the past few years has shown a tendency to tighten the relationship between the doctor and the patient. As for the medical profession, each time the code of ethics is revised there is a tightening of the confidential relationship. No decision by industry or management is likely to change the feeling for confidentiality between doctor and patient. There is a way in which management can be ethically informed when evaluation is required to protect an individual, to plan for his future, or to arrange for his retirement.

The medical director or the medical consultant, without in any way divulging the confidential feature of the relationship between the doctor and the patient, can make recommendations in the best interest of the employee. This development is one of the more important advances of the past two decades in industrial medicine. However, there was a time when management felt so strongly that it should have all the information because it was paying the bill that good programs could not develop. Sound advice on the part of industrial medical directors has changed management's attitude, with the result that there has been a corresponding increase in employee executive participation in executive health plans. *Norman S. Moore, M.D. Executive Health. New York J. Med. Nov. 1, 1958.*

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The Senior Citizen — Solution A Local Problem

RALEIGH C. OLDFIELD, M.D., OAK PARK

IN 1904, the famed Dr. William Osler made a farewell address prior to his departure from Johns Hopkins University to take the position of Regius professor of medicine at Oxford. It was a sad parting after 15 years of distinguished service at Johns Hopkins.

Dr. Osler then was 55 years old, and considered the most outstanding physician of his time. He was world renowned for his great clinical ability and his wide knowledge of medicine in all its branches. As an educator, he had no equal. He had a deep concern for humanity.

In his valedictory speech, Dr. Osler told his large audience that a medical teacher's life should consist of three periods—study until 25, investigation until 40, profession until 60.

He made a reference to a suggestion of a colleague, Anthony Trollope, that an admirable scheme would be to establish a college into which men of 60 could retire for a year of contemplation before a peaceful departure by chloroform.

His remarks were erroneously interpreted by newspapers as being a recommendation for the chloroforming of people when they reach 60. The resultant controversy continued for a long time notwithstanding efforts to convince the

press and the public that the reference was in jest.

Far be it from me to suggest something of a similar nature as the solution of a problem we face today — the care of persons over 65. I have passed that age. Within a few days I will retire as president of the Illinois State Medical Society, but I do not consider myself washed up. The good Lord willing, I hope to spend many more years in the pursuit of my profession.

Furthermore, I believe that the majority of the 15 million people of this country who have passed the age of 65 still have many years of usefulness before them if they are given the chance to produce.

I merely allude to the Osler episode to bring out the point that a situation that was of major concern at the turn of the 20th century is even a greater problem today. Whereas, in Dr. Osler's days the life span of man in the United States was less than 50 years, now he can look forward with confidence to reaching the Biblical age of three score and ten.

There are an estimated 15 million people in the United States who are 65 years of age or over. This large total of senior citizens is being increased at the rate of about one million every three years. By 1975, there will be an estimated

President's address, 119th annual meeting of the Illinois State Medical Society in Chicago, May 20, 1959.

20 million or more beyond what is considered the retirement age today.

In Illinois, approximately one million people are 65 years or over. Each year, upwards of 20,000 attain the age of 80, more than 3,000 pass 90, and about 100 reach the century mark. In 1920, only about one out of every 10 persons reached the age of 80. In 1957, two out of every ten passed the four score mark. About six out of every 10 attain 65 years of age.

On a national scale, about 6 million people over 65 are covered to a more or less extent by voluntary insurance. However, when illness strikes—and it is more likely to strike after 65—9 million are dependent upon (1) what income they may still have coming in; (2) savings that have a deflated purchasing power; (3) the assistance of relatives and friends, or (4) public aid.

These figures give an indication of the magnitude of the geriatrics problem not only in Illinois but throughout the country.

Fortunately, in this rapidly growing senior citizen population there are many people who are still income producing and self supporting. Most of them retain a spirit of independence despite the efforts of socialistic and paternalistic minded politicians to foist upon this nation a cradle to the grave welfare program.

Unfortunately, we also have a large segment that cannot take care of itself. For instance, a study by the Institute of Medicine of Chicago indicated there are 60,000 persons in Cook County who are disabled to the point where they cannot carry on normal activities.

Of these, 40,000 are being cared for in their homes and 20,000 in nursing homes or other institutions. The maintenance of about half of these handicapped people is being financed by the patients or their families. The others require partial or complete outside aid.

Unfortunately also is the fact that many corporations have an unrealistic retirement program that calls for the severance of a person from his employment upon the attainment of his 65th birthday regardless of his value to his employer or of his ability to continue a highly productive life.

What this amounts to is the placing of a penalty on age and experience and a premium on youth and inexperience.

Look around this room. Everywhere you will

find men over 65—men who have been driving forces in their profession and in their communities; men with knowledge and skills that will be a boon to thousands of people for many years to come.

Certainly, it would be a disservice as well as unrealistic if we in the medical profession would say: "You have reached 65; you are through."

As physicians, I believe we owe it to the people of this country to point out to employers that men and women of 65, because of medical progress, no longer should be subjected to compulsory retirement at an arbitrarily chronological age. It is well to consider the young man just coming up, or the man in the 40s and 50s, but we shouldn't create a problem which might be turned into an excuse to burden the younger generation with taxes to support the older.

Men and women who are forced into involuntary retirement have little chance of obtaining employment elsewhere. Excepting in cases of necessity, most employers will not take on workers who have reached the half century mark. Even fewer will consider hiring a man or woman over 65.

Some men and women who go into retirement, voluntarily or otherwise, have built up a little nest egg and have earned a pension in addition to the money received under social security. By judicious use of these funds—and notwithstanding the deflated value of the dollar—they may be able to carry on at a reduced standard of living.

However, it is when there is a catastrophic illness or accident that trouble develops. Current income becomes insufficient to meet expenses, and reserves are soon depleted.

We know that degenerative processes set in for all of us if we live long enough. For some, it will be earlier; for others, the deterioration comes later. In either event, a person has an increasing need for medical attention as he grows older.

The Health Information Foundation made a sampling study of about 1,700 persons over 65. It showed that group had an average of 7.6 physician contacts annually, exclusive of medical care while hospitalized. This is about two visits more than the over-all average.

More than two-thirds of these contacts were office calls. Only 22 per cent were in homes. The others took place in a clinic or by phone. It is encouraging to note that only about 2 per cent of the total sample said that lack of finances

kept them from seeing a physician. On the other hand, a goodly number who should have seen a physician failed to do so because they did not want to admit they were failing.

Thus, it can be realized that medical care costs are likely to become an increasing factor in the cost of living. This is a problem the people of this country must face. The answer must be found either in the traditional American manner at the community level or we will be called upon to accept a less desirable and more costly federal program.

We have the threat of such legislation in the Forand Bill which is being promoted under false pretenses. The measure has provisions that are likely to fool a lot of people, including physicians and hospital administrators.

The plan supposedly calls for a free choice of physicians and hospitals. There is this joker, however. Physicians, hospitals, and nursing homes—to be eligible for participation—must enter into a contract with the government and to subscribe to certain regulations.

These conditions at the moment may seem to be innocuous. But there is nothing to prevent administrative changes by the Department of Health, Welfare, and Education that will make so-called “free choice” a mockery. If, as it is likely to be the case, a patient must make his selection of a physician or a hospital from a prescribed list then there is no free choice.

Considering that most of the capable and successful physicians and the best type of hospitals may not want to become a part of the system by reason of the conditions imposed, the public will be denied the right to the best possible medical care.

The pending measure presents another threat. Many minor surgical procedures are being carried out in physician's offices. In order to take advantage of the provisions covering surgical and hospital costs, physicians will be pressured into sending patients to a hospital.

There have been such abuses under voluntary insurance. These will be multiplied many times under government medicine. In thousands of cases where an obligation is now recognized by family members there would be an inclination to shift the burden of personal care to the government, especially if the patient becomes difficult to handle. The result would be that the projected

cost of the program would be a gross understatement.

Of greater concern and one involving persons of every age would be a further overcrowding of hospitals, an overcrowding that not only would be a backward movement in American medical care but one that would be scandalous.

The Forand Bill is a billion dollar package, largely a giveaway. An analysis by the Department of Health, Education, and Welfare, estimated it would cost about \$900 million the first year to make the hospitalization benefits available to the social security recipients. Another \$14 million would be spent for limited nursing home care. The surgical benefits costs are estimated at around \$80 million.

In view of the fact that government estimates of the costs of welfare programs usually have been well under the actual figures, it can be expected that a billion dollar estimate is on the conservative side.

For confirmation of this we need but look up the history of the Social Security Act which has been a myth from its very inception. It started out actuarially unsound and the deficit in reserves has never been wiped out.

In an early period of wild deficit spending that brought about a record national debt, a check was kept on old age benefit taxes. Under the guise of adding to the benefits, more taxes were imposed. In recent years, the load on the wage earner and employer has been increased sharply.

The accompanying inflationary movement brought about a rude awakening for millions of people who had looked forward to an old age of at least moderate living and freedom from want. Instead, they found that the tax dollar had shrunk to less than half its value in purchasing power.

Now, comes the Forand Bill, ostensibly to make up this deficit by providing surgical and hospital care for these people. Actually, it is only another move in a campaign to foist socialized medicine on the American public step by step.

That is why it is so important that the medical profession and the public find a way to take care of its aged. Private enterprise—and by that is meant the medical profession, hospitals, every other person and organization identified with

medical care, industry, and the consumer—must produce a workable plan.

Such a plan on a national scale can be worked out only piecemeal at local levels. This requires time. Fortunately, we may be granted the needed time. The Forand Bill has the support of labor unions, but the measure may not be brought up for passage until next year.

It behooves all of us to see, by working individually and collectively, that we do gain more time to work out an acceptable and a constructive program that will make congressional action unnecessary.

Insurance carriers, including Blue Cross-Blue Shield, are rapidly expanding their coverage of these older people. According to the Health Insurance Association of America, 86 insurance companies today are issuing new individual policies to those 65 and over. Other ways that insurance is provided are:

- (1) The continuation of insurance for older active workers under group insurance plans;
- (2) the continuation of group insurance for retired workers and their dependents generally, with part or all of the premium paid by the employer;
- (3) continuation on an individual policy basis of coverage originally provided by group insurance;
- (4) new issuance of group insurance at advanced ages;
- (5) the continuation into the later years of individual insurance purchased in the productive years;
- (6) the issuance of insurance that becomes paid-up at 65.

Thus, it would seem that health insurance is generally available to the senior citizen. One problem is to make the cost more attractive.

The AMA and its constituent state and component county medical societies are carrying on a most aggressive campaign of education. At the same time, they are pushing the drive for the setting up of facilities that will meet the problem without the intervention of government.

Our education campaign, I regret to say, must include hospital administrators and trustees. The American Hospital Association, while expressing opposition to the Forand Bill, has adopted a defeatist attitude. Under the circumstances, we may not have the wholehearted support of the AHA in our fight against the measure.

If voluntary insurance of those over 65 is to be successful, we will have to have the full cooperation of hospitals in developing a successful plan.

Obviously, many of those on retirement or with a restricted income because of age cannot afford the insurance premiums now in force. Likewise, the insurance carriers cannot be expected to make any substantial reduction in rates for senior citizens and to shift the load to other groups.

It will be up to those who provide the medical and hospital services to make a readjustment in their charges. Already, we have indications from all parts of the country that physicians are willing to assist by accepting lower fees. In one state, the medical society has urged a medical and hospitalization plan to draft a policy on the basis of a 40 per cent reduction in physicians' fees from the average fee schedule.

The House of Delegates of the ISMS, at its 1959 annual meeting, paved the way for special low medical insurance rates for those over 65 with limited income. The Society will poll physicians throughout the state to ascertain if they are willing to participate in a Blue Shield plan calling for scaled down fees as payments in full. Lake County Medical Society, by an overwhelming vote, has agreed to do so.

But it is not enough for physicians alone to make sacrifices. We must have similar action by hospitals and ancillary services.

As a matter of fact, hospitals should take the lead in reducing the cost of medical care. The medical profession has had to take the brunt of the complaints against the rising cost of medical care although hospitalization costs have been the principal factors in the increase.

In the decade to the end of 1957, the fees of specialists and surgeons went up an average of 21 per cent and those of general practitioners rose 34 per cent. On the other hand, hospital rates advanced 87 per cent. In the last 20 years, physicians' fees rose 78 per cent but hospital rates went up 285 per cent. The general cost of living in that period was about doubled. These are government index figures.

We know that wages have risen sharply, that food costs have gone up, and that building construction and equipment are more expensive. Nevertheless, hospital administrators must look around for avenues of savings rather than to higher room and service rates to meet the situation.

In order to give better service, hospitals gradually shifted from one employee per patient to two employees per patient. Additional services

not directly related to the restoration of the patient's health have been provided in order to make a hospital stay more pleasant.

The cost of this has been passed on to the bed occupants. Maybe it is time to review the situation. Perhaps the patient will be satisfied if we dispense with some of the frills in order to bring down hospitalization costs.

At one of the earlier sessions today, Dr. Kurt Wolff, clinical director of the Galesburg (Ill.) State Research Hospital, said mental institutions are overcrowded with people over 60 who do not actually belong there. These patients are considered a burden for the general hospital, the nursing home, or their families.

Hospitals are beginning to erect wings to handle this type of patient more economically and with equal efficiency. This trend must be stepped up because we are getting more and more geriatric patients who will require a prolonged stay. Many of these people are ambulatory and need only medical attention. They and their families can provide some of the other services.

Another thing we can do is to encourage a greater use of the out-patient departments, and to discourage families from hospitalizing an older person merely because his care becomes a burden and he carries hospitalization insurance. Severance from home attention frequently is the last straw that creates a mental problem as well.

We should, as physicians, stress these points in our dealings with patients and their families. We should, in our hospital meetings, also endeavor to convince hospital authorities that we must do everything possible to discourage the overutilization of hospital services.

We also must convince administrators and trustees that they stand to lose more by passage of the Forand Bill than do physicians. When the government takes over the medical care of these people over 65 it will not only fix the fees of physicians but the maximum rates that will be paid to hospitals.

And, since this would be merely another stride toward socialization of medicine, privately operated institutions can well become a thing of the past.

But all of the contributions of the medical profession and hospitals toward a solution of this problem will be useless unless every commu-

nity does something about it, too. There is where we will find the answer.

The first step in a grass roots program is to make a survey of the situation. How many people are there in the over 65 bracket? How many are in a position to meet either fully or partially the cost of medical care? How many require assistance other than that of relatives?

Next, inventory the community assets to handle the problem. What provisions are there to take care of chronically ill patients? Are adequate nursing home facilities available at costs within the means of most of those needing attention? Are there rehabilitation programs that will restore handicapped persons to at least a partial earning capacity?

Industry, we must admit, will not often take on aged people unless there is an extreme scarcity of labor. So, other work must be provided. Women over 65 usually make excellent help in homes, or for the taking care of children. Men can do odd jobs that require part time employment only.

Every community should set up a clearing house through which the person looking for occasional work and the person requiring a temporary worker can get together.

Churches and other organized groups should unite their efforts in the development of programs to take care of our senior citizens. Here is an opportunity for physicians to display an interest in their communities that goes beyond the immediate care of the sick. They should give such movements their full support.

Preventive programs must be pushed. Major scourges of the older person are the result of faulty diets, poor hygiene, excessive fatigue, and aimless living. These must be eliminated through education and the establishment of adequate facilities. The person over 65 must be given some justification for living.

Once these things are done, thousands of people who otherwise might become public charges could be made independent and self-sufficient. Tax money now being spent for welfare programs could be channeled into construction or for other useful purposes. The people would be better off; the community would be benefited.

Is it worth the effort for all of us to put our shoulders to the wheel? The answer is decidedly, yes. So, let us get going without delay. We don't have too much time left.

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The Present Status of Dermatologic X-Ray Therapy

ANTHONY C. CIPOLLARO, M.D., NEW YORK, NEW YORK

THE atomic era, now entering its third decade, has brought new advances in practically all phases of life. We have observed changes in our philosophical concepts as well as in our political, economic, and social activities. Fears of death, of monstrosities, and even of the destruction of all life on this planet have been ushered in by the atomic age. Numerous changes have been instituted in the practice of medicine, especially in dentistry, roentgenology, and dermatology. These changes have been brought about partially because of fear of genetic mutation, leukemia, and bone cancer, and partially because of the desire of qualified users of ionizing radiations to eliminate unnecessary radiation exposure and to improve our highly effective safety measures.

Soon after the discovery of X-rays and radium, just before the turn of the century, physicians recorded the dangers and harmfulness of radiology. Ever since the early days of ionizing radiation, physicians developed a healthy respect for the potential danger of these invisible rays, so that over the years, protective measures have been improving steadily. Every user of X-rays or radium knows that any organ of the body can be affected adversely by these radiations when used improperly and in doses in excess to those considered within tolerable ranges.

But the use of X-rays and radium should not be curtailed because of unwarranted fears. While people have been harmed, many more have been helped. But their use should be reduced when not absolutely essential for diagnosis or for treatment to conform with the standards of the national radiation protection committees. Some contend that ionizing radiations may shorten the life span or cause congenital anomalies, leukemia, cancer of bone and thyroid. The indiscrimi-

nate use of X-rays and all other ionizing radiations is no doubt a factor in causing these abnormalities but there are other unknown factors. From a study of numerous reports on this subject, unequivocal evidence has not been submitted to support the contention that the proper medical use of X-rays, radium, and isotopes by qualified physicians has increased the incidence of leukemia, thyroid and bone cancer, or congenital anomalies; or that the life span has been shortened. The widespread and indiscriminate use of ionizing radiations by unqualified personnel and the stepped up rate of atom and hydrogen bomb explosions undoubtedly are hazardous to all forms of life and should be curtailed.

In the field of dermatology, X-rays have been useful for the treatment of malignant and many nonmalignant diseases. They are still useful and the good derived from the proper use of X-rays and radium in dermatology far outweighs the theoretical harm that might result in an occasional individual.

Great advances have been made in dermatologic roentgen ray therapy during the past 30 years. X-ray machines are no longer electrical and radiation hazards. Modern equipment is thoroughly shielded against electrical and radiation dangers. The unit of measurement is accurately defined and instruments for calculating dosage are simple to operate. To measure a dose of X-rays, we do not have to depend entirely on electrical factors such as voltage and milliamperage. No longer is a radiation therapist limited to one piece of apparatus. There are specialized machines for specific purposes. Thus one can employ with equal ease grenz rays, contact X-ray therapy, and superficial therapy. There are available cathode ray and cobalt therapy machines in addition to radium in all sorts of containers and almost limitless quantities of radioactive isotopes for the treatment of selected diseases affecting the skin. Progress during the past three

From the New York Polyclinic Medical School and Hospital. Read at the 118th Annual Meeting of the Illinois State Medical Society. Chicago, May 22, 1958.

decades in radiological education, in design of apparatus, methods of use of ionizing radiations, and their limitations has been phenomenal.

Some physicians are critical of dermatologists who use ionizing radiation in their practice. What a pity it would be to deny to those who need it, a safe therapeutic agent for the relief of painful, dangerous, and annoying symptoms and the cure of some diseases that could not be accomplished by other means.

During the past decade, ionizing radiations have been used less than formerly because of the tremendous progress made in all fields of medicine. For example, erysipelas and other microbial diseases are easily cured with antibiotics and the steroids control effectively so many pruritic dermatoses, including pruritus of the genitals and anus, that X-rays no longer are necessary. The same can be said of Mycostatin® and other antifungal agents in the treatment of monilial and other diseases caused by fungi, and the antihistaminics in many allergic dermatoses. A better understanding of the nature of disorders such as the collagen diseases and certain types of acne has reduced or eliminated the use of X-rays.

The amount of radiation reaching the gonads has been of particular concern to many, especially the geneticists. It is agreed that every precaution should be taken to prevent unnecessary radiation from reaching these organs. Some radiologists have exposed the ovaries of certain infertile women to promote fertility; where the method proved successful, the offspring were normal.

The human population has been exposed to natural background and cosmic radiation since the beginning of time without apparent harm. Now, all humans are exposed to increasing radiation from test explosions of hydrogen and atom bombs. So far, it has not been demonstrated that quantities of fallout radiation reaching the earth have produced clinically evident harmful effects. However, the quantity of radioactivity found in bones of humans is increasing constantly and milk also shows higher amounts of radioactivity. Any additional radiation from the unnecessary treatment of any disease or for diagnostic procedures should be avoided.

But the concept that small amounts of radiation that reach the gonads may cause mutations needs to be modified. Unfounded fears and the

withholding of ionizing radiations for treatment or diagnosis may prove far more harmful than the theoretic dangers from mutations. The fact that the human race is improving in physical and mental status with each generation, even though it has been exposed to small amounts of naturally occurring ionizing radiations, must mean that humans can coexist with small amounts of ionizing radiations. Dermatologists always have been concerned with this problem and have scrupulously covered the genitals with lead foil when applying X-rays to any part of the body. About 10 years ago, Callaway, Mosely, and Barefoot measured the amount of radiation reaching the gonads when treating various dermatoses with superficial X-rays. It is remarkable that their published figures compare so well with those obtained by us and others during the past few months.

The amount of radiation reaching the region of the gonads during a complete epilation amounts to about 20 milliroentgens. For treatment of acne vulgaris of the face, assuming that 16 treatments of 75r each of conventional superficial X-rays are given over a period of four to six months, only about 60 milliroentgens reach the gonads. And when treating a wart with 1,000r, using a lead mask, conventional shielding, a cone, and skin focal distance of 15 cm. only 26 milliroentgens reach the gonads. This amount can be reduced to nearly zero by the use of modern approved equipment, of cones, angulation of tube away from gonads, and the use of 4mm. of lead foil for protection. Thus it is seen that the theoretical harmful effects to the gonads resulting from the use of superficial X-rays for the treatment of malignant and nonmalignant skin diseases have been exaggerated and this has created unnecessary fears.

The discovery of X-rays by Roentgen in 1895 opened a new epoch in the field of medicine. These rays soon were used for diagnosis and treatment, and today ionizing radiations hold a pre-eminent position in dermatologic therapeutics. One of the most important therapeutic agents in the armamentarium of the dermatologist is the X-ray machine. He recognizes the inherent dangers pertaining to the use of all forms of ionizing radiations; yet their proper use renders these agents safe. Ignorance, faulty technique, overirradiation, underirradiation, im-

proper selection of wave qualities, improper intervals between doses, and other faults have done much to discredit the usefulness of superficial X-ray therapy.

The ionizing radiations employed most commonly in dermatology are roentgen rays. Radium is used far less frequently than X-rays and almost exclusively for cavernous hemangiomas and epitheliomas. Only a few dermatologists employ radium needles interstitially for cutaneous neoplasms. The radioactive isotopes have not, as yet, been found of great value by either surface or internal application in skin diseases. Thorium-X has been used successfully in few localized dermatoses. I doubt its efficacy in nevus flammeus, poikiloderma, alopecia, keloids, radiodermatitis, and epitheliomas, as has been reported. This agent, with its predominance of nonpenetrating radiations, is not suitable for treating skin cancer and the radiations are not sufficiently penetrating for the treatment of keloids.

Grenz rays, which are X-rays of extremely long wave lengths, having a half-value layer of approximately 0.035 mm. of aluminum, are becoming more popular. They are produced with kilovoltages varying from 8 to 15. The modern tubes are air cooled and have a window of beryllium or thin glass. Because of the extreme softness of these rays, they are incapable of penetrating even the skin. All but 15 per cent of the incident beam is absorbed in the first millimeter of skin. Most skin lesions reach to a depth of 3 mm., where only 3 per cent of the surface dose penetrates. If 300r is to reach a lesion of 3 mm. in depth, it is necessary to apply a dose of 30,000r at the surface. This is sure to cause permanent radiation changes, especially hyperpigmentation and telangiectasia. The concept of using unlimited amounts of grenz rays for recurrent inflammatory dermatoses is erroneous and harmful.

It has been claimed that grenz rays are effective in nevus flammeus. I have used these in treating this condition and have never been able to improve a single lesion. If nevus flammeus is treated sufficiently early in life, improvement may be seen in the lesion. But in such cases it should be ascribed to natural causes rather than to grenz rays because, with the passage of time, many light lesions of nevus flammeus improve spontaneously. Grenz rays have no specific biologic effects that are not common to all ionizing

radiations. Grenz rays are useful for treating superficial dermatoses involving the scalp, eyelids, and genital areas and also for recurrent pruritic dermatoses and inflammatory eruptions in children when it is necessary to protect epiphyses. The total doses and intervals of treatment should be in general the same as those for harder radiations. These nonpenetrating radiations having similar half-value layers may be obtained with conventional modern X-ray equipment designed for superficial therapy and employing an X-ray tube with a beryllium window. Using voltages of up to 100 KV, it is possible to obtain radiations having a HVL of 0.035 mm. of Al.

Contact therapy has been useful especially for the treatment of warts, epitheliomas, angiomas, and multiple keratoses. However, modern beryllium window X-ray machines may be used almost as well as contact therapy apparatus. There are some differences in output and in half-value layer between these two types of machines but not enough to make any practical differences.

Cathode rays are useful in such widespread diseases as mycosis fungoides and other lymphoblastomas, Kaposi's sarcoma, and the erythrodermas. However, this type of apparatus is not absolutely essential in a dermatologic practice. So far as I know there is only one such unit in use in the United States.

Radium in the form of plaques is used to a limited degree by a few dermatologists in cavernous hemangiomas and cutaneous neoplasms. Formerly, radium was used more extensively than at present. With the availability of radioactive isotopes, the improvement in design of X-ray apparatus, and advances in surgery, radium therapy is becoming less popular.

Many diseases of the skin respond to superficial X-ray therapy. Only a few illustrative conditions in different categories are dealt with here.

ACNE VULGARIS is one of the most common diseases that the dermatologist is called upon to treat. Patients often are treated by the family doctor, the allergist, the gynecologist, the endocrinologist, and the beauty counselor. Finally, the patient with severe acne vulgaris gets to the dermatologist. Judicious and proper combined treatment instituted early could prevent pits, scars, disfigurement, discouragement, and even psychic depression.

Many cases of acne vulgaris can be cured

without the use of X-rays. However, cases that show a tendency to rapid spread, leaving deep pits and scars when the pustules involute, and those in which deep pustular elements are pronounced or in which acne cysts are forming, as well as all cases of acne conglobata, should be given the advantages of X-ray therapy. In addition these patients ought to receive appropriate topical remedies and systemic and general treatment such as diet, antibiotics, and hormones. I have seen no evidence that X-ray therapy predisposes to greater scar formation. Early or late radiation sequelae do not occur when X-ray are employed properly.

For the past 20 years, I have adhered to more or less the same technique. I usually apply to each side of the face—after appropriate shielding of the hair, eyes, lips, and gonads—75r of low-voltage, unfiltered X-rays having a half-value layer of between 0.5 and 0.75 mm. of aluminum. This type of radiation is obtained from a conventional superficial therapy apparatus. If a beryllium window tube is used, a filter of 0.5 mm. of aluminum is required. The patient is treated each week up to a maximum of 16 treatments over a period of 24 weeks. At first, treatments are given weekly, and later the interval is increased. In some cases, in which erythema develops even after two or three treatments, X-ray applications are stopped. They are resumed when the reaction subsides, if the indications still warrant this therapy. In other cases it is necessary to give more than 16 treatments; the patient is kept under treatment with modalities other than X-rays for a period of a year and then X-ray treatments are resumed. Occasionally, it is necessary to give an additional course of eight treatments over a period of approximately 16 weeks. I have particularly observed some patients who received up to a maximum of 2,400r and after 20 years, no deleterious effects were observed. This statement is not to be construed as advocating that it is safe to administer 32 fractional doses of X-rays in successive weeks for acne vulgaris. If X-rays alone are employed, the results are likely to be disappointing. I cannot overemphasize the importance of employing X-ray therapy concomitantly with topical and systemic remedies.

When the back and chest are involved, they are treated at the same time that the face is exposed. There is no danger of affecting the

hemogram or of inducing other deleterious effects when the face, chest, and back are exposed on the same day. Care is to be taken to avoid overlapping. Acne generally involves only the sternal area, and it is necessary to expose only the midsternum. On the back, however, it is necessary usually to expose the area of each shoulder and the midportion of the back about the region of the first lumbar vertebrae. If these points of exposure are measured, the distance between focal points should be about 30 cm. The focal skin distance should be between 20 and 30 cm. I do not know of any patient with acne, treated with X-rays during the past 30 years, who developed cancer of the thyroid or bone or leukemia or who had defective offspring traceable to the radiation received. Nor have any of these people become sterile or developed changes in the hemogram.

TINEA CAPITIS caused by organisms such as *Microsporum audouini*, *Trichophyton tonsurans*, or *T. schoenleini* that do not respond readily to topical remedies should be treated with X-ray epilation to obtain a quick cure and prevent spread of the disease to epidemic proportions. Children with this disease should be isolated without delay. Fungicidal ointments often are unsuccessful. Waiting for natural immunity to develop or for spontaneous cure at puberty is uncertain and unscientific, since in the meantime the infected child may contaminate other children.

Temporary epilation with X-rays is a safe procedure, provided it is properly carried out and the apparatus is properly calibrated according to accepted physical and biologic standards. There is no unequivocal evidence to support the contention that treatment of tinea capitis with X-rays causes permanent baldness, is harmful to the meninges or brain, or causes genetic mutations.

The most practical technique is the Kienboeck-Adamson five-point method and to each point an epilating dose of between 300 and 340r is applied. The glabrous skin and the gonads are shielded carefully.

Failure to cure tinea capitis after X-ray epilation often is due to poor follow-up treatment. All fluorescent hairs seen under the Wood's light should be epilated manually before new hairs start to grow. Mild fungicidal ointments should be applied for at least two weeks after all fluores-

cent hairs have been removed. Infected broken-off hairs are loose following an epilating dose of X-rays, but are locked in the follicles by edema and require removal by forceps.

A second epilating dose of X-rays rarely is required. At least six months should elapse before a second epilation is attempted.

NEURODERMATITIS-PSORIASIS. There is considerable controversy regarding the treatment with X-rays for symptomatic relief of such recurrent chronic and pruritic dermatoses as neurodermatitis, psoriasis, lichen planus, and pruritus ani and vulvae. These diseases should not be treated routinely with X-rays. However, there are times when a particularly severe attack may be terminated quickly by the application of a few weekly fractional doses. The danger is in applying to the same areas repeated courses of treatment over a period of many years. The amount of radiation should be limited to four to six treatments in any one year to any one area. Such courses can be repeated for eight years without causing injuries.

Neurodermatitis and psoriasis sometimes become so extensive the eruption is universal. They may simulate an exfoliative dermatitis. In these cases, pruritus is severe and the discomfort unbearable. As an adjuvant to other methods of treatment, X-ray therapy often yields gratifying results. One third of the body is treated every other day with fractional doses. No one area receives more than 75r each week. The white cell count may be depressed slightly after such treatments but the effect on the hemogram can be minimized by lowering the voltage and reducing the half-value layer. During the past several years, whole body irradiation has been employed for the treatment of universal eruptions. The radiation is nonpenetrating. The HVL is in the neighborhood of 0.05 mm. of Al., the kilovoltage is from 30 to 100 and the distance about 2 meters from the body. The number of roentgens applied varies from 100 to 400 and the sites of exposure usually are the anterior and posterior surfaces of the entire body. This type of irradiation is so superficial that changes in the hemogram do not occur.

When psoriasis or neurodermatitis becomes universal, therapy with steroids and antihistaminic products often brings about quick remissions. Tranquilizers reduce severe pruritus and anxiety and induce undisturbed sleep. In these

diseases, the concomitant use of X-rays along with topical and systemic remedies will yield the best results.

PRURITUS VULVAE AND ANI. X-rays for the treatment of pruritus vulvae in a pregnant woman should be scrupulously avoided. Roentgen rays seldom are used today for pruritus about the anus and genitals. Many cases of idiopathic pruritus about the genitals and the anus respond quickly to local applications of steroid preparations. When pruritus is due to a monilial infection, it is controlled with Nystatin®. When it is a manifestation of psoriasis or neurodermatitis, appropriate treatment for these conditions clears up the pruritus and the cutaneous lesions.

VERRUCAE. Warts on the soles and about the nails respond to X-ray therapy. Contact therapy apparatus is particularly useful. I usually expose a circular area of one centimeter and apply 1,000r of X-rays having a HVL of 0.5 mm. Al. at one sitting. To a large area I apply as little as 600r and to a smaller area as much as 2,000r. One treatment usually is sufficient. If a second treatment is required, I apply half the dose after a lapse of one month. Verrucae vulgaris of the hands and fingers and filiform and digitate warts of the beard usually are treated with electrosurgery. Warts about the genitals respond exceptionally well to treatment with podophyllin.

Perhaps the greatest field of usefulness of X-rays is in the treatment of the lymphomas, especially mycosis fungoides and leukemia cutis. Leukemia cutis is rare, but cases have been reported in which there is no evidence of leukemia anywhere in the body except in the nodules of the skin. Then, months or years later, blood and the lymph nodes show definite signs of involvement. Cutaneous nodules respond remarkably well to irradiation. When they are small, numerous, and scattered over large areas of the body, it is necessary to divide the body into thirds and treat a third every other day, as is done with widespread inflammatory dermatoses. A dose of 75 to 100r generally is sufficient for resolution of most lesions. When the nodules are large and there are only a few of them, a single dose of 200r once every two weeks to each lesion, closely shielded, suffices. Sometimes the lesions respond to one treatment; in other cases, several doses are required. Deeper lesions require a filter of

1 to 3 mm. of aluminum. These patients should be under the supervision of a hematologist and should have periodic blood counts and examination of sternal bone marrow.

MYCOSIS FUNGOIDES presents a unique problem. There is no agent that is as effectual in prolonging life and keeping patients symptom free as X-ray. Nitrogen mustard and its related drugs, tartar emetic, and radioactive phosphorus are inferior to and more hazardous than X-rays. Patients with extensive lesions are treated in the same way as those with universal dermatoses. The body is divided in thirds and each portion receives a dose of X-rays each week consisting of 75r of conventional superficial X-rays with a HVL of about 0.5 mm. Al. However, most patients with mycosis fungoides have only a few scattered tumorous lesions. These are treated separately. The normal surrounding skin is shielded, and many tumors respond to a single dose of 200 to 300 r of conventional low-voltage X-ray therapy. Only the thicker lesions require a filter of 3 mm. of aluminum. Occasionally it is necessary to give three or four treatments, administered once every two weeks. Some of the rapidly growing ulcerative lesions require tremendous doses of highly filtered X-rays, and even this does not stop the progress of the disease. Ordinarily, however, mycosis fungoides responds well to relatively small doses. The treatments have to be continued as long as new lesions develop. It is remarkable how rarely radio-dermatitis is seen in patients with longstanding mycosis fungoides. Eventually, lymphosarcoma or reticulum-cell sarcoma develops in many areas of the skin and other organs and death soon ensues.

IDIOPATHIC MULTIPLE HEMORRHAGIC SARCOMA OF KAPOSI is a rare disease and usually has only cutaneous manifestations. However, some patients have multiple foci in various organs. In some cases, either lymphosarcoma or some other lymphoma occurs in patients who have had Kaposi's sarcoma for years. No therapeutic procedure gives such satisfying results as X-rays. When the lesions are superficial and multiple and involve an extensive area of an extremity, the whole extremity is exposed to radiations from a conventional superficial apparatus. Doses of 75 to 100r are given at weekly intervals. When the tumors are large, deep, and scattered they are treated indi-

vidually. Doses of 200 to 300r are administered every two weeks for a total of four to six treatments. Kaposi's sarcoma is relatively radiosensitive; it rarely is necessary to give as many as six treatments. Occasionally, ulcerative lesions occur and these respond more slowly to radiation alone. Supportive treatment with the use of elastic bandages and elevation of the extremities is helpful. When the disease involves many areas of the body, including the viscera, the prognosis is poor, and little can be expected from radiation therapy. In some cases, amelioration of the disease has followed therapy with radioactive isotopes, nitrogen mustard and related substances, hormones, or penicillin. Fromer has reported good results in some cases of Kaposi's sarcoma and mycosis fungoides treated with cathode rays that had failed to respond to ordinary X-rays.

One of the earliest lesions to be treated soon after X-rays were discovered was carcinoma of the skin. It was soon learned that all types of cutaneous cancers, exclusive of the melanomas, respond extremely well to irradiation.

BASAL CELL EPITHELIOMA. An ordinary basal cell epithelioma, having a diameter of 1 cm. or less, responds well to irradiation with various techniques. I prefer to apply a total dose of 4,200r of X-rays over a period of two weeks in divided doses, using conventional superficial X-rays with a half-value layer of approximately 0.75 mm. of aluminum. Six treatments of 700r each are given every other day. The opening in the lead shield is 0.5 cm. larger than the lesion. Regardless of how small the lesion is, the diameter of the opening in the shield is never smaller than 1 cm. For areas smaller than this the risk of miscalculating the dose is great. When the lesions are deeper and larger, having a diameter of 2 cm. or more, a smaller total dose of harder radiations is employed. Six treatments of 600r each are given every other day. X-rays are filtered through 3 mm. of aluminum. In shielding, care is taken that at least 0.5 cm. of normal surrounding skin is included in the irradiated field. These techniques, total dosage, radiation quality, intervals of treatments, and shielding apply to most basal cell epitheliomas. The factors of treatment can be varied and modified without risking failure of cure, provided the basic principles underlying the particular technical method are adhered to.

SQUAMOUS CELL EPITHELIOMAS. In

treating lesions of small size, having a diameter of less than 1 cm., it is well to increase the total dose up to 4,800r. To minimize the local roentgen reaction, a treatment of 600r for a total of eight doses is given every second day. Protraction permits a larger total dose with minimal cutaneous reactions. Deeper lesions are treated with filtered X-rays, and larger lesions require a smaller dose of filtered X-rays. It usually is sufficient to give 500r every second day for eight treatments, using a filter of 3 mm. Al.

Squamous cell epitheliomas of the lips respond satisfactorily to radiation. The principles of treatment are the same as those for squamous cell epithelioma of the skin. It is essential that uninvolved mucous membrane, tongue, gum, and teeth are well protected with lead foil. If palpable submental or submaxillary nodes are present, surgery is preferred to irradiation. The treatment of carcinoma of the tongue and other intraoral lesions is not within the realm of the dermatologist.

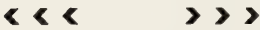
Many skin diseases respond well to radiation, including angiomas, blastomycosis, bromidrosis, keloids, sycosis vulgaris, seborrheic dermatitis, and rhinoscleroma. The method of treating these disorders with ionizing radiation are described in standard textbooks on this subject.

CONCLUSIONS

Roentgen rays remain useful in treating some

diseases of the skin. Many types of apparatus are available today to the dermatologist so that he can employ different qualities of radiation at different intensities for specific purposes. He has available many sources of ionizing radiation other than X-rays for treating benign and malignant skin diseases. The present trend in cutaneous roentgenotherapy has been to use ionizing radiation more specifically and less routinely. Only a few diseases have been discussed to illustrate their usefulness. It would be a step backward to accept the edict that X-rays are no longer useful in dermatologic practice. The modern dermatologist uses X-rays with greater skill, greater knowledge, and greater accuracy than his forebears; he is much more discriminating and can predict better what the results of his treatment are going to be. Injuries from overirradiation are far less common than formerly. Our patients are entitled to the best therapeutic procedure that medical science has to offer. Some skin diseases are best treated with ionizing radiations. It is inconceivable to me how dermatology could be practiced without the benefit of an X-ray apparatus. In short, ionizing radiations are essential to dermatology. Radiation therapy for dermatologic disorders is keeping pace with the progress reported in all other phases of medicine in this atomic era.

40 E. 61st St.



Agglutination Tests in Patients and Families with Rheumatoid Arthritis

FRANK R. SCHMID, M.D., CHICAGO

Dr. Frank R. Schmid: Serologic testing procedures for diagnosing rheumatoid arthritis date back to 1930 when Cecil and co-workers showed that the sera from some rheumatoid arthritis patients would agglutinate hemolytic streptococci. This phenomenon subsequently has been shown to occur with pneumococci and some other bacteria. In 1946, Wallis substituted colloidal particles that agglutinated when mixed with sera of some rheumatoid arthritics. Six years earlier, Waaler utilized sensitized sheep cells for agglutination by rheumatoid sera. It was not until 1948 that Rose, Ragan, Pearce, and Lipman made this test practical as a diagnostic procedure by using serial dilutions of the patient's serum in combination with sensitized sheep cells. The cells were sensitized with a subagglutinating dose of rabbit antibody formed against sheep cells. The test requires preliminary destruction of serum complement and removal of interfering heterophile antibodies. Agglutination was found in as many as 65 per cent of rheumatoid patients.

In 1954 Svarz, Ziff, and others observed that by using only the euglobulin portion of sera from rheumatoid subjects, about 80 per cent positive results could be obtained in the sensitized sheep cell agglutination system. Moreover, false positive results were decreased, using this modification. It also has been observed that red blood cells pretreated with tannic acid will absorb normal human gamma globulin and will agglutinate in the presence of sera from some rheumatoid arthritis patients. Plotz and Singer in 1956 noted that latex polystyrene particles also absorb normal human globulin and will agglutinate in the usual test system — the so-called latex agglutination test currently available in many clinical laboratories. This procedure does not require prior adsorption of the hetero-

phile antibody or destruction of complement and gives over 70 per cent positive results in rheumatoid arthritis patients.

The essential reagents in all these systems is a factor in rheumatoid serum that combines with a source of gamma globulin. The particle serves only as a carrier for the globulin. A demonstration of this takes place when sera from some patients with high titers of rheumatoid factor precipitate spontaneously in the cold with their own gamma globulin without requiring a particle for the agglutination.

The inhibition test, as proposed by Ziff, is a more tedious refinement of the procedure, and perhaps is the most accurate test available, although not generally applicable to widespread clinical use at this time. The test is dependent on the fact that there is in normal serum a factor that will inhibit agglutination by the rheumatoid factor. A known amount of rheumatoid factor is added to serial dilutions of the test serum. Normal serum will inhibit the agglutination

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induced by the added rheumatoid serum, whereas serum from a rheumatoid patient cannot inhibit the agglutination.

The rheumatoid factor has been found to reside in the gamma globulin fraction of the patient's serum. Ultracentrifugation studies show it to be a protein of high molecular weight (about 1,000,000) with a sedimentation constant of 19. The bulk of the gamma globulin has a smaller molecular weight of 150,000 and a sedimentation constant of 7. The 19-S component contains antibodies but it is not known whether the rheumatoid factor is an antibody.

Agglutination tests do not reflect activity of the rheumatoid disease process, and correlate poorly with the age or sex of the patient. The test is said to be less frequently positive in children or early in the clinical course of the disease. But Ziff, using the inhibition test previously alluded to, found the test positive in early cases and in over 90 per cent of rheumatoid children tested. Positive results seem to correlate best with the presence of rheumatoid nodules and with the severity of the bone and joint destruction.

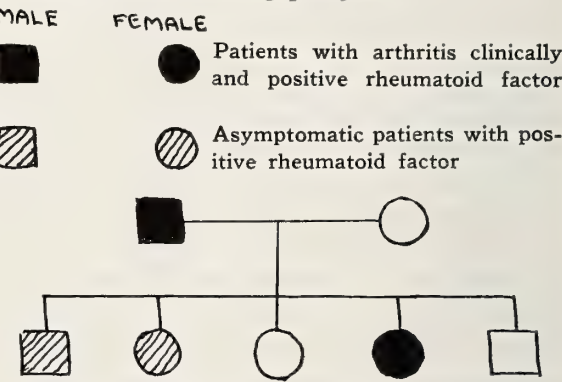
Certain patients who have other diseases with high levels of gamma globulin may give false positive agglutination tests for rheumatoid factor. The incidence of such false positive tests varies in published reports, but there is general agreement that it is present in some other collagen disorders, liver disease, and some granulomatous conditions and distinctly uncommon in other conditions. Positive tests are reported in some series in 28 per cent of patients with disseminated lupus erythematosus, in 7 per cent with scleroderma, in 3 per cent with polyarteritis nodosa, and in 16 per cent of patients with infectious hepatitis. Six of 61 patients with sarcoidosis were reported to have positive agglutination tests when human gamma globulin was used in the test system. Agglutination did not occur when animal (rabbit) gamma globulin was used. Two cirrhotic patients had positive tests using sensitized sheep cells. They reacted like rheumatoid patients, in that agglutination occurred with human and animal gamma globulin. Agglutination tests are not often positive in ankylosing spondylitis, Reiter's syndrome, or psoriatic arthritis, conditions included by many in the rheumatoid syndrome.

I would like to discuss briefly our experience with 140 relatives of patients with rheumatoid arthritis who were tested for the presence of the rheumatoid factor. It has been stated that there is a small but significant increase in incidence of this disease in close relatives of patients with rheumatoid arthritis — perhaps 3 to 4 per cent as compared to 1 per cent in a control group. Of the 140 relatives studied, 16 had symptoms of arthritis, leaving 124 patients who were asymptomatic. Almost 17 per cent of the asymptomatic relatives had positive tests — a statistically significant finding when compared to the control group of 157 individuals with a 5 per cent incidence of positive tests. Of the 16 relatives with symptoms, four had rheumatoid arthritis, one probable, and 11 possible rheumatoid arthritis according to the classification of the American Rheumatism Association. There seemed to be a somewhat higher incidence of positive tests in the male relatives of rheumatoid patients. There was no correlation with age.

	Number	Number Positive	Per cent Positive
All Relatives*	140	28	20
Asymptomatic	124	21	16.9
Controls	157	8	5.1

*Parents, 44; Offspring, 36; Siblings, 60.

The investigation should be considered a pilot study and no definite conclusions drawn as to mode of inheritance of the rheumatoid factor (if such be the case). The speculations are intriguing, however. One family showed a particularly high tendency for the rheumatoid factor as evidenced in the following pedigree:



Dr. Nicholas J. Cotsonas, Jr., Associate Professor of Medicine: Does steroid therapy affect the titer of the rheumatoid factor?

Dr. Schmid: No. If the patient is in a true

remission, however, there may be a decrease in titer, or occasionally, a disappearance of the factor.

Dr. Sherman Weissman, Resident in Medicine: Have you observed an individual with a negative agglutination test convert to positivity?

Dr. Schmid: We have seen patients who had negative tests early in their disease later convert to positive reactions.

Dr. Randall L. Mann, Instructor in Medicine: Has the rheumatoid factor been observed in synovial joint fluid?

Dr. Schmid: Yes, where looked for. It probably reflects only the transudation of serum proteins into the inflamed joint spaces, and not a site of production of the factor.

Dr. George Gee Jackson, Associate Professor of Medicine: Could not these tests be measuring a constitutional or metabolic defect rather than an immunological reaction?

Dr. Schmid: This is not known at this time. There is evidence that individuals have genetically specific gamma globulin probably arising from a single gene locus. Other serum proteins, such as absence of gamma globulin and fibrinogen, are under genetic control. The rheumatoid factor is another protein but is found only in patients with rheumatoid arthritis or in their families and sometimes in a few other conditions that have been mentioned.

Dr. Weissman: Has the rheumatoid factor been found in the first few days of life?

Dr. Schmid: We have studied the cord blood of two infants with rheumatoid arthritic mothers. One child had the factor. We have not pursued this sort of study any further.

Dr. Burton R. Andersen, Resident in Medicine: What is considered a significant titer?

Dr. Schmid: For each system and laboratory, there are variations. Using the sensitized sheep cell test a positive titer is 1:14 and with the latex fixation test a significant titer is 1:20 or higher.

Dr. Jackson: Is it not generally true that the more sensitive the test the greater the incidence of false positive results?

Dr. Schmid: This is not the case with the inhibition test; the incidence of false positives is less than 5 per cent, the same as less sensitive methods.

Dr. Hans G. Griebble, Chief Resident in Medicine: Have you ever seen high agglutination titers revert to normal levels?

Dr. Schmid: No. In our experience the titer usually has decreased but has never returned to normal. It may very well do so in a complete remission.

Dr. Alan R. Aronson, Research Fellow in Medicine: Our group has followed two patients with disseminated lupus erythematosus who had high titers for the rheumatoid factor while they had severe arthritis, and in both cases the titers returned to normal when the joints were no longer actively involved.

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Toxic Effects of Drugs Used in the Treatment of Cardiovascular Disease

ARNOLD S. MOE, M.D., EAST ST. LOUIS

The drugs used in the treatment of cardiovascular disease usually are safe when prescribed in proper dosage and with certain precautions. However, the treatment of heart disease itself differs in a number of ways from that of other pathological states. One important difference is that treatment generally is continuous. Digitalis, quinidine, and the antihypertensive drugs—in association with salt free diets and diuretics—may necessarily be used for months, years, or a lifetime. The physician who has brought a patient from a state of severe cardiac decompensation to a near normal state of compensation often is loath to discontinue the use of certain drugs for fear of precipitating a recurrence.

One of the main reasons for the development of toxic effects in long term treatment is the employment of the so-called maintenance dose, or that amount of a drug given daily over a long period as advocated in a textbook, a report in a medical journal, or even in a drug circular. Fortunately, this dose fits most patients. However, when we remember we are treating a disease that affects individuals of all ages and sizes, that we are dealing with the heart in all of its pathological states, and that the associated pathology involving lung, kidney, or vascular systems is different in each case, it becomes obvious that each case must be individualized.

Digitalis is the most widely used drug in cardiac treatment. It also is probably the most misused. Hoesley and Luan¹, in an excellent review of the use of digitalis, state the causes of digitalis intoxication succinctly: (a) inaccurate history, (b) inflexibility, (c) confusion, (d)

hurry. They mentioned cases where patients were given large doses of a form of digitalis by two different physicians on the same day. However, it is commonly true that a patient who has been under treatment for heart disease for a long time knows whether or not he is taking digitalis. If not, a hospital record may sometimes be found or it may be possible to get this information from the patient's druggist.

The idea of inflexibility applies quite well to the considered infallability of the maintenance dose referred to above, and the reluctance to change or discontinue treatment. Craig, Lown and Levine² recently stated wisely "Average dose formulas, as well as other dogmatic oversimplification in prescriptions of digitalis drugs, disregard biologic variability." They also make the observations that the margin between therapeutic and toxic doses narrows as the severity of heart disease increases, and the fact that potassium ion depletion renders the heart much more sensitive to digitalis.

Confusion applies to the indiscriminate use of all digitalis preparations. A number of excellent reviews of the different types of glycosides have been presented by Batterman and Degraff³, by Eichna and Taube⁴, and Kay⁵. All agree that toxicity may develop with any of these preparations and that the wise physician learns all he can about one or two digitalis preparations and uses them discreetly. In hurrying to treat the patient, the physician may be seeking too much too soon. A notable example of this was a method of treatment devised by some of the interns on the medical service encountered during the writer's residency. This "treatment"—called the "Molotov Cocktail"—consisted of 10 cc. of aminophyllin, 2 cc. of meralluride, and 8 cc. of lanatoside C mixed in the same syringe with

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50 cc. of 50 per cent glucose. It was given intravenously to patients in a severe state of cardiac decompensation, especially if admitted to the hospital after midnight. Some of these patients were found to be remarkably improved by the following morning, but it is difficult to say how many were not so fortunate.

The usual danger signs in the use of digitalis are well known but infrequent signs and symptoms may not be recognized. In cor pulmonale, Ferrer⁶, et al., never uses rapid digitalization lest pulmonary arterial pressure increase too rapidly. In the first place its use may or may not help. This applies equally to cases of mitral stenosis of severe degree in whom pulmonary edema may be precipitated. Kay⁵ reports that in cases of rheumatic myocarditis with a fast regular rhythm, improvement may be obtained with digitalis without appreciable slowing of the heart rate. Digitalis must not be pushed to the intoxicating level only in an attempt at achievement of a slower rate. Cases of thyrotoxicosis with auricular fibrillation also may be helped despite a fast ventricular rate.

Crouch and co-workers⁷ reviewed 100 cases of digitalis intoxication. They found that the 0.2 mg. of digitoxin used as a daily maintenance dose was prone to prove toxic and, that the single dose method of full digitalization often results in toxicity with any kind of digitalis preparation. Of the 100 patients, 20 per cent had symptoms without signs of digitalis intoxication and 59 per cent had symptoms with signs. Of the group 21 per cent had signs of toxicity alone; it is in such groups that the physician must seek and be able to recognize toxic signs.

Practically all types of arrhythmia may be produced by digitalis intoxication. These include premature ventricular contractions, bigeminal rhythm, premature atrial contractions, sinus tachycardia, auricular fibrillation, first degree heart block, second degree heart block, complete heart block, ventricular tachycardia, paroxysmal auricular tachycardia, auricular flutter, wandering pacemaker, and ventricular fibrillation. In the group of 100 patients, of 27 deaths, seven were due to digitalis intoxication.

In their excellent review, Hoesley and Luan¹, offer a few more important points. In their opinion, the history was more important than signs, symptoms, and the electrocardiogram; large initial doses cannot be followed by addi-

tional large doses until assessment of earlier treatment has been evaluated. They noted further that signs of toxicity following vigorous diuresis are due mainly to potassium depletion and if this depletion already exists or is suspected in a previously edematous patient, digitalis must be used with extreme care. Cases needing special observation include those in whom a pre-existing arrhythmia disappears after digitalization and then reappears, or those in whom an increased rate occurs during maintenance therapy previously well controlled. In such cases it is safer to withhold digitalis for two or three days before increasing the dose. Be wary of cases with previously irregular rhythm, changing to a regular rhythm, but at an increased rate.

As recently as two weeks ago a patient was seen in our office, referred by a public aid agency for cardiac evaluation. She said she was taking two digitalis tablets (a leaf preparation) daily. The fact that she exhibited bigeminal rhythm suggested digitalis intoxication. Further questioning revealed that she was first told to take two digitalis tablets three times daily. After 10 days she was scarcely able to talk. She reported this to her physician by telephone; he then advised her to take three tablets daily. After a few weeks the patient herself decided to reduce the dose to two tablets daily and had continued this for several months. Obviously, this dose was too large for her.

The final answer to the cause of digitalis intoxication is closer to solution now than ever before. The importance of the potassium ion is becoming more apparent. This was discussed thoroughly in a preliminary report by Keyl.⁸

The following case is presented to illustrate some rather severe toxic effects caused by the injudicious use of digitalis.

The patient, a 60 year old white clerk was seen in the office on August 2, 1952. He stated that in November of 1949, he had suffered a "heart spell" characterized by rapid beating of the heart. There had been no dyspnea or chest pain. He was started on a digitalis leaf preparation from the first day of the attack and finally was put on a maintenance dose of "one and one-half tablets" per day with instructions to increase this by a tablet a day if the heart should beat more rapidly than usual. About one month before his first visit to our office he suddenly began to speak nothing but nonsense. He had no control over this situation, which continued to recur, persisting a day or two at a time.

His eyes were irritated by bright lights and his desk blotter, which he knew to be green, appeared purple. As a result of this and other visual disturbances, he was referred by his physician to an eye specialist who could find nothing to explain the symptoms. The patient then decided to seek further consultation and went to other eye specialists, each of whom told him that examination of his eyes failed to reveal the cause of his visual disturbances. About this time the patient began to suspect that the digitalis had something to do with his eye trouble and mentioned this to his physician. He was told then, as he had been told many times before, that he must not stop digitalis for fear of starting another "heart spell." At no time did he have any evidence of anorexia or nausea.

Physical examination revealed a well nourished, well developed white male. There were no obvious abnormalities of eyes, ears, nose, throat, neck, or thyroid. Respiration was normal and lungs were clear. Blood pressure was 144 mm. systolic and 84 mm. diastolic. Examination of the heart revealed an apex rate of 94 per minute and regular rhythm. A loud, rough systolic murmur was heard over the entire precordial area. The abdomen was negative. There was no peripheral edema. Fluoroscopic examination revealed a heart of normal size and contour. There was a calcified area in the aortic arch about two cm. in diameter. The lungs were clear and diaphragmatic movement was normal.

Digitalis was stopped on August 2, 1952. Six days later the patient felt his color vision was improving. The apex rate at this time was 90 per minute. On August 16, 1952, he felt much better and was then able to distinguish almost all colors. There was no wavering of the peripheral visual fields, which he had noticed earlier. However, the patient did not feel that normal vision had been completely restored until six weeks after stopping digitalis. At this time the apex rate of the heart was 66 per minute. The patient was last seen on March 1, 1958, feeling well, with a cardiac apex rate of 65 per minute and having had no further "heart attacks."

The first electrocardiogram on August 2, 1952 (Figure 1), showed extreme prolongation of auricular ventricular conduction of 0.40 seconds. The U-shaped ST segments and depression of ST junctions are indicative of digitalis effect. Two weeks later AV conduction was 0.24 seconds. On September 13, 16 weeks after the first electrocardiogram, AV conduction was 0.20 seconds and all evidence of digitalis effect had disappeared.

The clinical course in this patient suggests that the original "heart spell" was probably an episode of paroxysmal tachycardia, which, in association with a loud rough murmur, might appear to be evidence of severe cardiac disease. Digitalis was prescribed overenthusiastically. Moderate tachycardia of 94 per minute in the presence of extreme prolongation of the AV con-

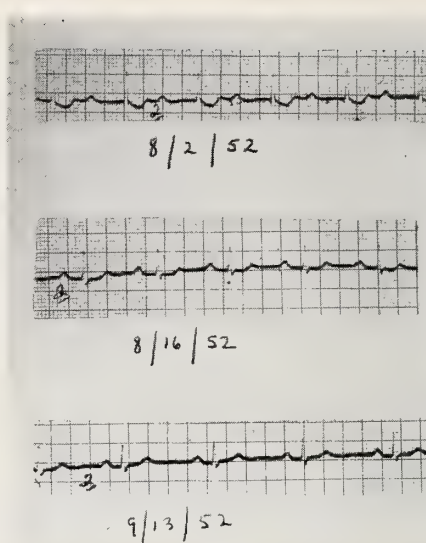


Figure 1

duction certainly is evidence of severe digitalis intoxication, especially in view of the fact that six weeks after stopping digitalis the pulse had dropped to a rate of 65 per minute. The widely publicized yellow vision as evidence of digitalis intoxication obviously is not the only visual disturbance that may be caused. This case also suggests that toxic effects of digitalis do not necessarily progress from the usual early evidence of anorexia, nausea, and vomiting to the more unusual and severe symptoms.

Quinidine, a useful and widely used drug, especially in the treatment of cardiac arrhythmias, is known to give rise to many toxic symptoms. Its use is not predicated on the presence of cardiac decompensation necessarily, but it often is employed in an attempt at preventing heart failure. This drug probably is given electively far more often than is digitalis. Toxic effects range from mild to lethal. One advantage quinidine has over digitalis is its noncumulative effect, but a distinct disadvantage lies in the fact that a single, relatively small dose may be followed by disaster. Levine⁹ mentioned three cases seen in his practice, whose deaths were attributed to quinidine administration; postmortem failed to show emboli or mural thrombi. He stated that death may result either from cardiac arrest or respiratory failure. All of his fatalities occurred in patients with mitral stenosis.

Beckman¹⁰ lists the following common toxic effects of quinidine: nausea, vomiting, epigastric distress, headache, diarrhea apprehension, tin-

nitus, palpitation, mental depression, flushing, and sweating. Less commonly occurring symptoms are visual disturbances, extreme excitement, fever, and various types of rashes and urticaria.

Freedman¹¹ and co-workers reported a case of hemolytic anemia attributed to quinidine. Thompson¹² reported 611 cases collected from the literature in whom quinidine was thought to be the cause of death in 2.1 per cent of the cases.

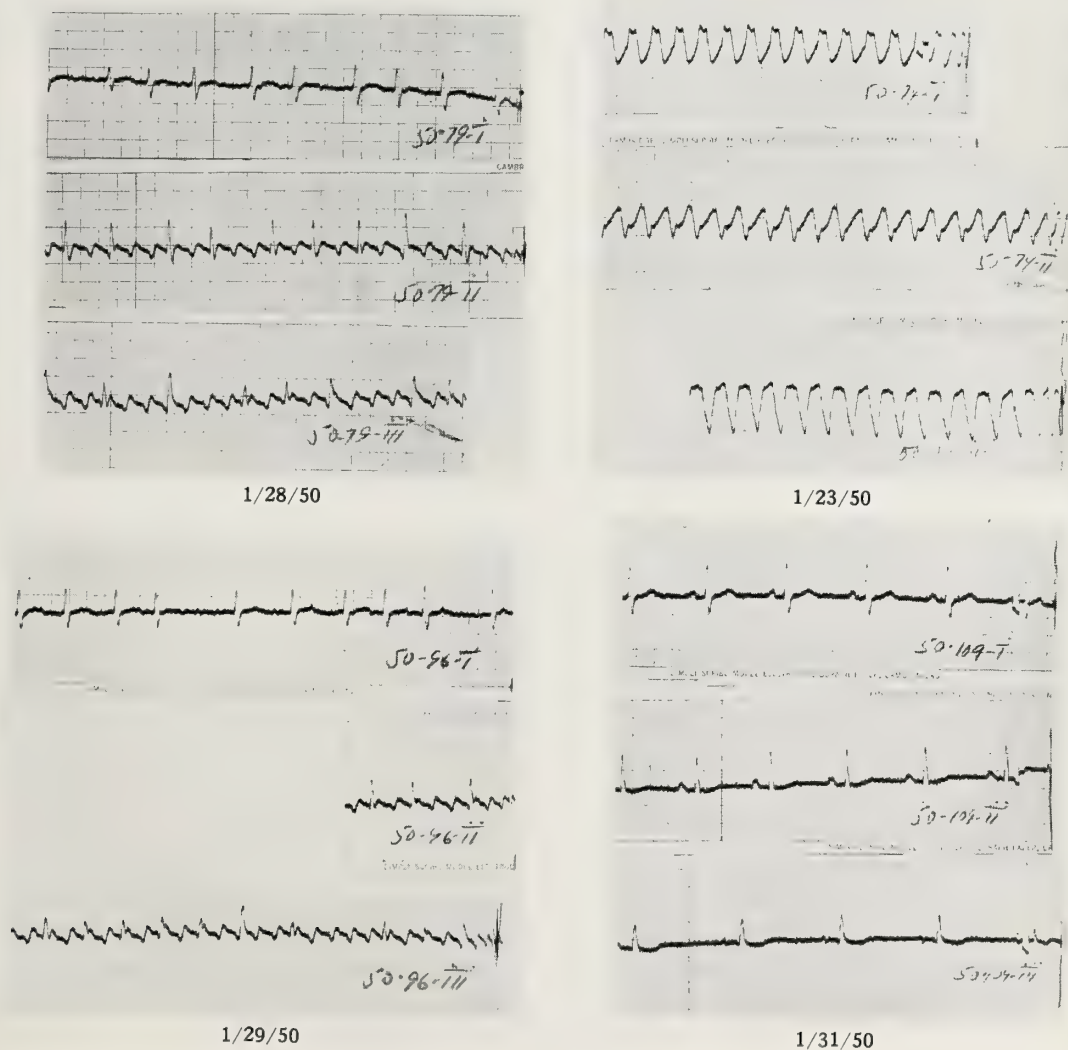
A disquieting toxic effect of quinidine is its known tendency to produce ventricular arrhythmias as a complication of the treatment of atrial arrhythmias or premature ventricular contractions. On the other hand, quinidine has long been advocated as an effective treatment of ventricular dysrhythmias. Beckman¹⁰ states that

"ventricular tachycardia responds very well to quinidine therapy." Levine¹³, in discussing ventricular tachycardia, makes the statement that "quinidine as almost a specific drug for this type of tachycardia."

In view of this, the following case certainly presents a paradox.

The patient, a 53 year old white male, had been observed in the office for five years for episodes of tachycardia. On January 17, 1950, he was admitted to the hospital for treatment of an episode of tachycardia that had lasted longer than usual. Physical examination revealed a well nourished, well developed white male. Skin, head, eyes, ears, nose, and throat were normal. Thyroid was not unusual. Lungs were clear. Respiration was of normal depth without evidence of dyspnea. Blood pressure was 138 mm. systolic and 89 mm.

Figure 2



diastolic. Examination of the heart revealed an apex rate of 146 per minute. The tones were rather soft. No murmurs were heard. Blood counts and urinalyses were normal. Basal metabolic rate done at a previous office visit was minus 11 per cent. Electrocardiogram done at the office just before admission showed ordinary auricular tachycardia. On the day after admission, quinidine was started in doses of 0.2 grams every four hours day and night. In 24 hours the dose was increased to 0.3 grams every four hours, but the heart rate continued at 120 to 140 beats per minute. On January 23, four days after starting quinidine, the patient complained of feeling tired and weak. The apex rate was 240 per minute. Electrocardiogram (Figure 2) revealed ventricular tachycardia. Quinidine was stopped at once. Electrocardiogram on January 28, revealed an auricular fibrillo-flutter with a ventricular rate of about 110 per minute. The patient failed to improve and on January 29, was started on digitoxin, 0.2 mg. three times daily. On January 31, the electrocardiogram revealed a ventricular rate of 70 per minute. At this time he felt well and was discharged. He was kept on a maintenance dose of digitalis leaf 0.1 grams daily.

Ventricular tachycardia in this case apparently was caused by quinidine and probably represented an idiosyncrasy to the drug. We can only surmise what would have happened had he exhibited ventricular tachycardia on admission and had then been treated with quinidine.

In treating hypertension, we are dealing with the field probably most commonly associated with clinical heart disease. As recently as a few years ago the primary remedy was phenobarbital. We all remember the new hope engendered by the development of new hypotensive drugs. However, we again find ourselves limited by toxic effects encountered in their use and the literature is voluminous with such reports.

Hexamethonium was the first widely used ganglionic blocking agent and, while effective in lowering blood pressure, is certainly used much less commonly now. Paine¹⁴ listed some of the toxic effects, including constipation, dryness of the mouth, and blurring of vision. These symptoms may be tolerable if a concomitant, controllable reduction of blood pressure is effected. However, he reports more serious effects encountered such as paralytic ileus, prostatic obstruction, eustachian tube obstruction, and salivary duct obstruction. Even more dangerous is the sudden extreme drop in blood pressure when a patient with advanced atherosclerosis assumes a standing position. Blood pressure determination by the patient at home has helped

to some degree in preventing calamities, but one wonders how many unreported cases of cerebral vascular accident, myocardial ischemia, or bad falls have occurred in patients taking hexamethonium.

Fishberg¹⁵ lists some important contraindications to the use of hexamethonium and other ganglionic blocking agents—namely: a) Cases with diastolic pressure of less than 100 mm. systolic, b) patients over 60 years of age, c) symptoms of coronary insufficiency, d) severe cerebral atherosclerosis, e) a history of cerebral thrombosis, f) non-protein-nitrogen over 50 mg. per cent, g) prostatism, h) myocardial infarction within six months, and i) patients with organic pyloric obstruction. If the drug is prescribed with these contraindications well in mind the number of instances of calamitous results with the use of hexamethonium and other ganglionic blocking agents may be reduced appreciably. However, this imposing array of contraindications also reduces the usefulness of the drug to a considerable degree.

Mecamylamine, another ganglionic blocking agent, is considered much less toxic. However, Furste and co-workers¹⁶ reported four cases encountered within a few months suggestive of acute surgical abdomen, which they attributed to its use. In March of this year we observed the same syndrome in a patient of ours who had severe abdominal cramps, abdominal tenderness, and rebound tenderness. After stopping the drug, all symptoms disappeared after about 10 days.

Hydralazine, an anticholinergic agent, seemed to offer renewed hope for the treatment of hypertension, but the number of side effects and toxic effects are numerous. Milder reactions such as dizziness, tachycardia, palpitation, headache, and numbness and tingling of the extremities often are tolerable and may disappear during its continued use. In the process of lowering blood pressure, hydralazine has been known to produce or aggravate angina pectoris in some patients through increasing cardiac work. Depression and anxiety are two other severe toxic effects.

Aitchinson¹⁷ and co-workers considered hydralazine dangerous in severe mitral stenosis. By means of cardiac catheterization they demonstrated that although the systemic arterial pressure decreased, the pulmonary arterial pressure was actually raised. Increased cardiac output and heart rate put a greater load on the right

ventricle. Paine¹⁴ reported severe toxic effects of hydralazine such as fever, skin rashes, hematuria, albuminuria, anemia, leucopenia, lymphadenopathy, and splenomegaly. He noted that almost all patients who developed this complex of symptoms and findings had become normotensive before side effects appeared.

Erickson, et al.¹⁸ reported rheumatoid and lupus erythematosus-like syndromes as complications of hydralazine therapy for hypertension. The following case represents the rheumatoid effect of this drug followed by the depressive effect of reserpine.

The patient, a 36 year old white school teacher, was first examined in the office on December 27, 1941. At that time he complained of dizzy spells, fatigue, and frontal headache. His blood pressure was 160 mm. systolic and 110 mm. diastolic. Physical examination otherwise was essentially normal except for some tortuosity of blood vessels in the ocular fundi. Potassium thiocyanate was used after the blood pressure had reached 180 mm. systolic and 120 mm. diastolic with moderately good response. His blood pressure averaged 150 mm. systolic and 100 mm. diastolic until May, 1953, when it was found to be 200 mm. systolic and 130 mm. diastolic. Thiocyanate was discontinued and hydralazine was started. The dose was gradually increased to 150 mg. four times daily. Rauwolfia was added in November, 1953. On October 15, 1954, the blood pressure was 130 mm. systolic and 80 mm. diastolic. In December, 1954, pain and swelling appeared in many joints. When hydralazine was reduced to 100 mg. four times a day there was some decrease in pain and swelling. Hydralazine was discontinued on January 8, 1955. Two weeks later the joints were much more comfortable. His blood pressure was 140 mm. systolic and 80 mm. diastolic. Four months later the blood pressure was 160 mm. systolic and 100 mm. diastolic and Rauwolfia was replaced with reserpine, one milligram daily. Two weeks later he complained of insomnia, restlessness, and depression and felt he was unable to carry on his work. Psychiatric consultation confirmed the impression of a severe depressive state. At this time reserpine was discontinued. After six months of psychotherapy he had made a complete readjustment. He resumed teaching and has had no recurrence of depression. On February 22, 1958, his blood pressure was 140 mm. systolic and 80 mm. diastolic.

Cannady¹⁹ reported a case in whom jaundice developed following the administration of hydralazine for only 48 hours. This occurred on two occasions with no other cause found for its appearance. Another even more severe toxic effect of hydralazine is reported by McNicol and Hutchinson²⁰, represented by a case report of a

40 year old male patient who was given the drug for only six weeks. This patient developed fever, anemia, thrombocytopenia, leucopenia, and marked lassitude. The bone marrow was hyperplastic. The blood pressure, previously 225 mm. systolic and 125 mm. diastolic was low during the acute phase. The following case is reported as a representation of this same severe syndrome.

The patient, a 45 year old white female beautician, was found to have a blood pressure of 190 mm. systolic and 100 mm. diastolic in 1956. She had been noticing blurring of vision and severe nosebleeds. She was hospitalized for treatment and was started on hydralazine in gradually increasing doses to 150 mg. four times daily. Other antihypertensive drugs had not been well tolerated. Hydralazine itself caused severe headaches, which were controlled by Benadryl® 50 mg. taken with the hydralazine. After leaving the hospital the blood pressure ranged from 150 mm. systolic and 100 mm. diastolic to 138 mm. systolic and 80 mm. diastolic. Blood counts on February 25, 1957, revealed a hemoglobin of 12.1 grams, white blood count of 7,250, and a normal differential count. Blood counts taken through 1957 were within the normal range. In February, 1958, she began to tire quickly. Fatigue was followed by anorexia, nausea, and loss of 11 pounds. She had noticed some soreness in the left upper quadrant and felt unable to continue work. She was admitted to the hospital on February 24. Blood counts revealed a hemoglobin of 8.8 grams, red blood count 1,260,000, and white blood count 3,500. Differential count revealed 40 segmented forms, 52 lymphocytes, and 8 monocytes. Stool examination failed to reveal the presence of occult blood. Gastric analysis revealed no free HCL after histamine. Chest X-ray was normal. Intravenous pyelograms, a gastrointestinal series, and cholecystogram were all normal. Bone marrow revealed marked hyperplasia. There were no megoloblast or L. E. cells. Nausea disappeared on the fifth day in the hospital or about one week after discontinuing hydralazine. Two blood transfusions of 500 cc. each were given. Appetite began returning and the previous depressive attitude had completely changed to one of cheerfulness. She stated that now she was able to read without difficulty and recalled that in the past few weeks of work she had been unable to focus on names in an appointment book. On March 17, 1958, the hemoglobin was 12.0 grams, white blood count 7,500. Blood pressure at that time was 142 mm. systolic and 82 mm. diastolic. Soreness, which had been present in the left upper quadrant, had disappeared. She returned to part time work on March 20, 1958, and full time one month later. Blood pressure had increased to 190 mm. systolic and 110 mm. diastolic on April 28, 1958.

Despite these effects of hydralazine, we still consider it a useful antihypertensive drug in selected cases.

Because of its relatively minor effect on the blood pressure, Rauwolfia probably leads many to consider it quite safe. It is being extensively used in the treatment of hypertension. The following reports indicate that it is not completely free of undesirable effects: Gibbons²¹ et al. reported four cases out of 56 treated who developed severe anxiety, agitation, and depression when treated with Rauwolfia. Less serious side effects were weight gain, drowsiness, fatigue, loss of initiative, and nightmares. We have had two patients on Rauwolfia who developed depression of severe enough degree to require electroshock therapy. Of Gibbons' cases a total of 82 per cent of 56 developed these symptoms. Wilson and Wimberley²² found that aside from nasal congestion, bradycardia, sedation, muscular aches and stiffness, nightmares, depression, paresthesia, and pleuritis, Rauwolfia also produced multiple premature ventricular contractions. Achour, et al.²³ reported gastrointestinal disturbances in 28 per cent of those treated with Rauwolfia. Of 70 treated, 15 were depressed, one committed suicide, two required electroshock, and four required prolonged psychiatric management. On the other hand, Bello and Turner²⁴ found by use of the double blind method that reserpine caused neither a consistent nor an adequate blood pressure reduction. Two-thirds of their cases showed side effects such as muscular aching, drowsiness, headaches, nausea, and vomiting. Paine¹⁴ mentions that Rauwolfia probably is the most dangerous of the hypertension remedies rather than the mildest, for it is the only one that has literally killed patients. Its effect of slowing the heart occasionally may be followed by a release of other pacemakers productive of extrasystoles and even auricular fibrillation. Thus, the bradycardia caused by Rauwolfia may distort the guideposts of simultaneous digitalis treatment and lead to inadequate digitalis dosage. Therefore, when both drugs are given, the state of compensation must be the guide to adequate digitalis dosage rather than the degree of bradycardia or appearance of premature ventricular contractions, which might otherwise be considered as evidences of digitalis intoxication. Hollister²⁵ reports four cases of hematemesis and melena complicating treatment with Rauwolfia. He concludes that in patients with known ulcerative disease of the gastrointestinal tract or hemorrhagic diatheses it appears that Rauwolfia is contraindicated

unless used in conjunction with adequate laboratory control.

In general, from our own experience, the toxic effects of the various types of antihypertensive drugs dealt with above seem to be avoided or minimized by the use of combinations of the drugs. In this way, smaller doses of each may be used and still be effective. Orgain, Munroe, and Donnelly²⁶ reported similar findings. They stated that "Hypertensive disease, when present in the severe form, generally requires the addition of a blocking agent to the combination of reserpine and hydralazine."

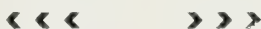
SUMMARY

The list of toxic symptoms and signs of only a few of the drugs used in treating cardiac disease is imposing. However, the usefulness of these drugs in general far outweighs their toxic effects. Too often the fault lies with the physician rather than with the drug. He must be aware not only of the benefits of the agent but of the usual and unusual toxic effects. Any attempts at reducing toxic effects must be predicated on the fact that in all cases the history is of utmost importance. Furthermore, the patient's physical status must be constantly observed and reevaluated and he must be individualized.

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A Generalist Views Public Health

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Modern Family and Public Health Physicians

The modern generalist is a family doctor who is expected by his patients to treat not only acute and chronic diseases but family preventive medicine as well. This has been a basic change from the older concept of the family doctor, whereby he was expected to appear in emergencies such as acute illnesses but was not consulted much for the other two fields of preventive and chronic medicine.

In the medical superspecialization of today, the family doctor is hard pressed to keep abreast of the rapid changes in all of the various fields of medicine — in particular, those that pertain to him and his management of the family unit in the home environment. For acute and chronic diseases in individual patients he has the benefit of specialists and consultants should he feel he is beyond his depth. In the field of preventive

medicine for the community he has specialists who also are physicians, and the county and state health department medical officers. As a generalist, I recognize the need for those specialists in community health just as I recognize specialists in individual health practice. But though I recognize the need, I have asked questions about public health. I have wanted to know what effect a good local health department would have on the present system of medical practice. Would it mean socialized medicine? Would it infringe upon my private practice? Would the medical society have any part in planning health programs for my community? Would the department of health help my own practice? I will answer these questions in a general way.

The physician trained in public health should participate within our medical societies. Where professional intercourse occurs through medical societies, both can learn of the other's desires and needs, and can adjust to each other in the best interests of the public. There is nothing more disgraceful or frustrating than to see in public print arguments between physicians over

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public health matters. This undermining and undercutting will destroy medicine as we know it today. Discussions of controversial matters should be carried on within the family parlor of the medical society and not in scandal sheets. Once mutual action is decided upon then we can all, through our medical societies, go down the line for a decent and respectable public health program.

The County Medical Society and the Health Department

During the past 10 years it has been common for a practitioner to hear that public health is nothing more than a step toward socialized medicine, and that workers in this field are socialistic or leftist. True, in some departments of health and in some areas where organized medicine has failed to assume its responsibility for the development of that department, some infringements have occurred among politically appointed and politically inspired public health officials who have not had the benefit of the views of organized medicine and the practitioners of today. This is the exception and not the rule. Usually, an outstanding offensive against socialized medicine has been found where organized medicine, through its societies and the efforts of its dedicated physicians, has tried to work together in harmony and partnership with its health department.

The generalist of today — the family doctor, general practitioner, or whatever term you wish — is a busy active individual, often overtired, overworked, and overly annoyed by those who wish to tell him how he should carry on his practice. I can say this to you in clear conscience, for I am a general practitioner involved in family medicine. But I am deeply concerned with progressive moves that will make our medical practice and our patient care better.

When the generalist turns to public health physicians for consultation and advice, he expects them to remain interested in organized medicine and in the basic free enterprise system; he expects them to respect the right of the patients to choose their physicians; he does not want the department of health involved in the treatment of persons who could secure treatment through the normal physician-patient relationship. In county health departments, where organized medicine provides leadership and guidance,

we find the right of the practicing physician is respected.

Generalist's Concerns in Modern Practice

It is not enough for us to practice medicine for our patients, without taking an interest in the governmental and community trends that affect the medical profession which can affect our traditional patient-physician relationship. Insidious infringements and the trend toward socialized medicine will begin if we are careless.

A generalist is concerned also with the right of choice of physician by patients. He wishes this choice not to be usurped by anybody — individuals, insurance companies, industry, labor unions, voluntary agencies, or health departments. This sacred right has to be protected by constant vigilance on the part of the physician, not only in his daily practice but in his daily contacts with the community and governmental affairs.

Physician participation on boards of voluntary health agencies is a necessity — one might say even an obligation. Any one or small groups of physicians cannot serve on all these organizations; they must be distributed, given widespread participation, with each physician taking on a particular interest for his own. How can we expect to prevent the development of general diagnostic studies by voluntary health agencies if we do not participate on their boards and express firmly, truly, and dispassionately the views of organized medicine and of the patient-physician relationship?

We who fear that health departments are carrying on too many immunization programs can help ameliorate the situation by serving as consultants and partners to our health departments so that when needs are found within the community they can be fulfilled by existing facilities rather than by duplicating facilities. In this way, the health department will be assigned responsibility for persons who cannot provide immunization for themselves and must receive it from public sources. This decision is made by the health department and medical society together. The health department here plays its true role as consultant to the generalist in the field of community medicine.

The generalist is again concerned with his own local and state medical societies. This concern can be translated into action with the physician

as a participant within these bodies for the best interest of medicine. There are no cliques in medical societies that do not result from the indifference of the individual members to their duties and responsibilities as members of these organizations. Those who work deserve to be recognized. Recognition for prestige's sake alone is a shallow and unhealthy thing for our medical society. Individuals who accept the responsibility and the prestige, and return these honors with work will be our best public relations men.

Generalist and Public Health

A generalist is anxious to have local control of affairs pertaining to public health, for only in the local areas can needs truly be evaluated. They cannot be evaluated at some distant state capital thoroughly and carefully, without extraneous matters being drawn into the evaluation, such as patronage, personal ambitions, and politics. A generalist desires a program in public health within his local area available for his convenience and local needs. He does not wish to have letters and second-hand discussions carried on over long distances about community health problems.

Generalists of metropolitan and of rural areas have different needs in the field of preventive medicine. These special needs can best be served by an alert vigorous county health official of the medical profession in conjunction with a progressive, well trained staff. The generalist need not fear the health department as a step toward socialized medicine. When he has a voice in it, he is close to it and can use his medical society as a sounding board for his particular problem.

The community in which we practice as family doctors and generalists has specific health need. Each of our localities, whether it be metropolitan or rural, or north or south in our state, has its own particular variation in public health problems. These can best be served by local control, such as is being done in Pennsylvania. In our state there has been a decentralizing of control of the state health department which has placed itself in the capacity of an advisor; the local regional health units are in charge. We have numerous local facilities which vary in our communities, according to the need. One city may have a tuberculosis clinic, another a rheumatic fever clinic, still another a cleft palate center. There are gaps, however, which have disturbed

the public, and the public wants to know what we intend to do about them. If overlaps do occur, we should see that they are not the result of infringement or duplication by government of the existing local facilities. The community is looking to the medical profession for the leadership that is necessary to produce a well balanced, co-ordinated public health program. It should not find us wanting. We must be available, willing, and able to give such medical leadership and to help them avoid the pitfalls of ill conceived schemes and plans by well meaning but uninformed do-gooders.

Generalist and Voluntary Health Agencies

Within our communities we have voluntary health agencies providing multiple services. Numerous new organizations in the voluntary health field have sprung up on particular diseases and subdivisions of diseases. We have private and voluntary health groups and bodies concerned with particular diseases; we also have public institutions dedicated to specific diseases. It behooves us as physicians to see that the community needs, as expressed by these agencies whether voluntary, private, or public — are co-ordinated and fulfilled in a competent medical fashion. We cannot expect this to happen if we simply lend ourselves in name only to such organizations. We should be careful, when we say we are going to help or serve on a board, or help a health cause, that we know what particular cause it is. In other words, we as physicians should not lend our names to any cause without actual participation. It is dangerous and can reflect on us in an unsatisfactory fashion.

Generalist and Local Health Departments

With these concerns of the generalist and the community needs in our particular areas in mind, there is a solution for a co-ordinated public health program. That solution is simply a well organized and professionally staffed local health department. What are the basic functions of a local health department? Briefly, they are seven:

(1) *Vital Statistics*. What are the particular health problems of the community, pertaining to disease, births, and deaths? What are the trends with these diseases? These answers currently can be given to us by an alert active local health department through its vital statistics.

(2) *Communicable Disease Control.* We have had many problems lately with immunization. We have been plagued by such a "shot-crazy" public that many of us have been driven to "oral shots" to relieve the pain. Nevertheless, we must admit the development of new means and methods of immunization of populations against previously crippling diseases and be prepared and ready to carry out such programs. I am not advocating that these programs be carried out on a massive clinic basis. I am saying that we, as physicians, should anticipate such massive immunization programs and then set them up through our medical societies so that we use the family doctor's office as the immunization center for the community. For those who are unable to afford it, we use existing clinics of hospitals and official health departments. Usually, we have failed to be prepared or to recognize our responsibility in this particular area until it has been thrust upon us. This is poor public relations; we appear to the public and to the press to be denying people immunization because we do not wish to staff these so-called clinics. A good health department can help by preparing plans with the medical society and informing the public of the plans that have been prepared for preventing outbreaks of diseases. A good health department can be a wonderful bulwark and an emergency stopgap in the case, for example, of flood areas threatened with typhoid fever. Here it can step in and give us a hand with typhoid inoculations and guide the type of program best suited for the areas.

(3) *Environmental Sanitation.* With the urban sprawl today, with one city or borough merging through its suburbs into another municipality, we have run into a number of problems relating to sewage disposal, water, food, garbage collection, and disease carrying pests. Good county sanitation rules carried out by an efficient county health department can be our best aid in these problems.

(4) *Laboratory Services.* A county health department using existing hospitals and/or commercial laboratories on contract, or located in an area of a large population, having its own laboratory, can be of great assistance to us in the prompt routine testing of water and milk and other diagnostic studies for diseases of public health importance. Here again, private practice

does not wish a health department to duplicate existing community facilities. Whenever possible, health department should use our hospital or private laboratories — physician run and physician controlled. I am sure that is the wish of the majority of the men in the field of public health. However, we must realize that if our hospitals are not willing to extend themselves into the field of milk, water, and food inspection and testing, such as has happened in some areas, then the health department must find some means of satisfying those requirements.

(5) *Maternal and Child Care.* Here is another field where the health department has been accused of infringing and stepping on the toes of the private practitioner. However, in the best interest of the community, pre- and postnatal instructions of mothers should be carried on in the clinics for those who cannot afford private care. Recognition of abnormalities, the proper securing of medical care, assistance in school health programs, the obtaining of correction in defects found in school medical and dental examinations, are necessities. Here, too, an efficient health department will help by referral back to the family physician or the family dentist, and will not attempt to provide such services themselves.

(6) *Health Education.* Good health departments can help in the publication of accurate and effective information on currently important health subjects. They can help in the mobilization of support for attack on local health problems; help co-ordinate and utilize existing resources of voluntary health agencies; they can work with physicians, co-operating with our medical society policies, by helping to educate the public. Community education on health matters can be well accomplished by efficient public health practices.

(7) *Chronic Disease Control.* This is one of America's important public health problem today. We who have been accustomed to worrying only about acute diseases, now find ourselves swamped by people with chronic problems requiring modern medical care and are overburdened at times trying to locate places for these people. Hospitals, attuned to acute illness, are not prepared physically or economically for long term illnesses. A good health department can help in the co-ordination of chronic disease ef-

forts. It can help in producing materials and information for people on how to take care of themselves—thus helping restore the family unit through the medical term so that the patients may again have self-respect and pride in the fact that they can care for themselves and are not thrust upon the taxpayers or charity.

What about the type of physician who heads such a local health department? Basically he should be a practitioner trained in the field of public health. Surely we have many good men who have learned public health through years of experience without any formal public health education or training, and these men are serving us well today. But in the future we must have physicians who have devoted themselves to the field of public health, and who have taken their residency and graduate training in this field. They should be active, vigorous leaders in the community and in the field of organized medicine. There are many doctors throughout this country who are health leaders as well as heads of local health departments, and who are active within their medical societies. Moreover, this type of man, because he is active in the medical society, would realize we have to be practical in the approach to public health problems. Surely it would be wonderful if all of the millions of people in the United States or in the county had immunization against various diseases, but this does not mean that all these millions have to be immunized in clinics. The county medical society, working with the county health director, should co-operate to prepare preventive measures for the community health—each listening to and learning from the other, and then developing the program collectively so that the community will have a united front on public health matters.

The type of man who runs a county health department must be prepared to provide emergency reserves, or be a rallying point in time of disaster. What about floods and tornadoes? What about train wrecks? The county health director, in co-operation with the county society disaster committees, have prepared for such disasters.

The type of man who administers such a department would be willing to provide public health laboratory services to aid us, as physicians, in the diagnosis and treatment of disease. The

diagnostic help should be given by them and the treatment by us, perhaps even with their specialized consultant opinions. This is typical of the poisoning programs that have been set up throughout Illinois. The physician who heads such a department should be dedicated to organize medicine and should preach the gospel, "consult your family physician." He should help us in letting the public know that every family should have a family physician.

Problems of Local Health Departments and Physicians

Medical leadership is desperately needed in the field of chronic disease, particularly in mental health. I would like to quote Dr. P. F. Lucchesi, Chairman of the Committee on Preventive Medicine and Public Health, of The Medical Society of the State of Pennsylvania: "The problem of chronic illness is a good example of the serious condition which must be worked out with the active participation of the physician and not left merely to official or voluntary agencies to get the program going. The medical profession must take the lead in solving this problem."

Dr. Lucchesi has launched a sputnik. Some of the voluntary health movements in the field of chronic disease were not initiated or guided in their early phases by physicians, but by laymen concerned over an apparent lack of interest by physicians in a particular problem. Thus, one or two men who had a particular disease stirred up enough community interest to develop a new agency. We must evaluate all these agencies carefully to be sure that they do not duplicate existing services, and then we must participate in the development of their programs to see that they uphold the high standards of modern medical care.

Poisoning is another problem. As you have done in Chicago, we in Pennsylvania are inaugurating a program for setting up poison information centers and a public educational program on the dangers of accidental poisoning. Poison cases are being reported and information is available to physicians through the poison control center on various commercial products and their contents. This is the type of work that can best be done by our local health departments or hospitals as consultants to the practicing physician.

The school health program has been a worry

in many states and it is time this was re-evaluated. We must stand up for a program based on the utilization of the family doctor's office as an examining center for the patient. What value is a 15 minute examination of a child without proper consideration of the relationship of that child to his previous health and to the family unit? The family doctor alone can give the best examination and information on this particular student. It is quite impressive for a school physician to tell a parent his child has a murmur or needs his tonsils removed, possibly sending the parents into a frenzy, calling their family physician or a specialist on the matter. No explanation is made that this child has a congenital murmur that is not affecting health. Immediately after such a discussion, fears are planted in the child's mind and he is prone to develop a heart phobia. What about the child who supposedly has bad tonsils? The physician and family doctor could tell you that the child has not had a throat infection in two years. I am sure school physicians can give us many examples of defects that they found which had not come to the attention of the family doctor but why could not all these examinations be done, with the responsibility resting with the parents, in the office of the family doctor or in a clinic if the parents cannot afford private care? A good program of the county health department can assist in the guidance of rational school health programs.

What about the problem of socialized medicine? Again I would like to quote the Chairman from Pennsylvania, Dr. Lucchesi, who said: "The best bulwark against socialized medicine is a good health department." We, as practitioners, need have no fear of the health department in the direction of socialized medicine when we stop and think that it is our consultant in the field of preventive medicine just as other specialists are our consultants in the highly technical fields of medicine. We need have no fear of these departments for we helped to develop them according to local needs through organized medicine, and helped in the guidance of their direction, utilizing the state health department in an advisory capacity to the counties just as the state medical society is the advisory unit to the county medical societies.

One problem of the local health department

is cost. It is cheap when you figure the services rendered and realize the variations that occur in some states on a per capita basis. An investment of \$1.50 to \$2.00 per capita will give us a good health department, though that does not mean we start with that as most of the local units start small and expand gradually as needs require and as organization permits.

The problems of politics concern us with local health departments, but this is best eliminated when, as in Pennsylvania, the state law provides for a merit system for public health personnel and protects technical, qualified persons in their job. Also, as existing units are consolidated, the state protects the old-timer in his post so that his experience becomes part of the new modern department. Nonprofessional employees and clerkships will be under the political patronage system, but the basic employees from Pennsylvania are protected by the merit system and by their own qualifications and training.

The differences between our political parties, the Republican and the Democratic, need not be feared in a good health department with medical society guidance, for there is nothing that a politician likes less than to be accused of tampering with the public's health. For this reason, most politicians tread lightly when it comes to this subject, and so long as the local health department is close to the problem of organized medicine we need have no fear unless we become negligent of our department and of our responsibilities to our local health units.

Other problems of local health departments and physicians are related to public relations. It is important for organized medicine's views to be expressed adequately through good relationships with the press, TV, and radio. So, likewise, is it for the local health department.

Again, a word about the problem of the metropolitan vs. the rural area. The goals of physicians are the same: the best care of the patient, at the least cost, and with the most effective results. Even though the type of problem a generalist handles may be different from those of a specialist, so may the problems of the city physician be different from those of a rural physician. With the fundamental desire of the most good for the public, the county health department can help to co-ordinate the respec-

tive community needs, whether they be metropolitan or rural.

CONCLUSION

We in Pennsylvania are proud of the partnerships our physicians have with their health departments. It has been typified by the leadership in Pennsylvania of our state medical society in the development of the modern state department that we now enjoy. It is typical of the county leadership that has developed in Pennsylvania through our county societies, and which is working in the direction of more and more good county health departments or multi-county health departments. This can be accomplished only if we remember these basic points:

We must have dedicated individuals familiar with the problems of public health and the community needs, willing to give their time and energy to the development of local units.

We must remember that it is important that we, as physicians, be thoroughly indoctrinated in the public health programs of today. We must concentrate on these programs, guide and help them, and at the same time be fully aware of what is best for our particular areas through community health measures.

We must work to see that we have an informed public through good public relations and through nonpartisan or bipartisan approaches with strong leaders of both parties working vigorously for the common good of the community.

We must encourage careers in public health and the obtaining of trained civil service personnel in this field. More young people should be stimulated to enter these fields, and to be aware of our views concerning preventive measures.

We must have well balanced co-ordinated community health programs, with organized medicine as advisor and consultant. Medical leadership alone—with mutual co-operation between health departments and county medical societies—will result in positive action and will give an answer to the community needs in the field of public health. I should like to quote Dr. Gunnar Gundersen, President of the American Medical Association, who said in a recent address before the American Association of Public Physicians:

"The success of the public health programs depends to a large degree upon the practicing physicians and other medical personnel and medical facilities in the community. A health department unsupported by the medical profession, divorced from the community hospitals, and alienated from others in the community working towards similar goals, is a sorry thing indeed. These responsibilities are civic obligations, and they must be met by all citizens and especially physicians who are doctors of medicine dedicated to rendering service to humanity." 3123 State St.

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The Low Salt Syndrome in Congestive Heart Failure: The Importance of Dietary Sodium Restriction

PETER J. TALSO, M.D., F.A.C.P. CHICAGO

Restriction of dietary sodium has come to be accepted universally as one of the major therapeutic procedures in the management of congestive heart failure. It is of historic interest that such dietary restriction was suggested some 500 years ago, yet it did not receive popular application until during the past several decades.¹ With the close of World War II, practical methods of flame photometry became generally available. As a result, determinations of serum sodium concentration became part of the routine study of patients with congestive heart failure. Following a period of rigorous salt restriction, accompanied by the use of powerful diuretic agents, initial improvement in some was followed by deterioration manifested by muscular weakness, apathy, a rising blood urea nitrogen, and a decreased serum sodium concentration. Improvement often was noted when sodium intake was liberalized or when sodium salts were administered intravenously.²

This led to the term, "The Low Salt Syndrome" and to the general belief that a low serum sodium concentration reflected sodium depletion, precipitated by a low sodium diet and/or the use of diuretics. The term is a misnomer in that it connotes an actual depletion of body sodium stores. This fact has been borne out clinically in that the administration of sodium salts to patients with a low serum sodium concentration in congestive failure frequently fails to alter

the serum sodium level and sometimes precipitates the patient's death. Furthermore, studies of body sodium stores by the use of radioactive isotopes have demonstrated that the total body sodium in the circumstances is far greater than normal.³ Thus the level of the serum sodium concentration does not necessarily reflect the total quantity of sodium in the body.

In considering the genesis of a low serum sodium concentration in the presence of congestive heart failure, it is well to consider some of the factors that produce heart failure. Many mechanisms have been proposed and in all there is a marked reduction in urinary sodium output. These mechanisms appear to be actuated through increased aldosterone production or through stimuli that simultaneously increase aldosterone formation. The result is that urinary sodium output frequently approaches zero. In addition, it has been demonstrated that one of the most powerful stimuli to aldosterone production is dietary sodium restriction. Thus the patient with congestive heart failure who is on a sodium restricted diet has several factors operating simultaneously to diminish urinary sodium loss.

Diuretic agents such as mercurials, carbonic anhydrase inhibitors, and chlorothiazide-like compounds will produce sodium diuresis; however, this is self-limiting and tends to be transitory. Therefore, sodium depletion via the renal route is not likely to occur in congestive heart failure. But it may occur through extrarenal routes as with diarrhea, vomiting, and biliary fistula or by way of the kidneys in the presence of adrenal insufficiency or advanced renal disease.

Since frank sodium depletion occurs only rare-

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While the Nutrition Committee of the Chicago Heart Association is sponsoring this article, the opinions expressed are those of the authors and do not necessarily represent the official view of that committee.

ly in the presence of congestive heart failure, some other explanation must be sought to account for the low serum sodium concentrations frequently observed in this condition. Several etiologic factors may play a role in producing hyponatremia.

A marked elevation of the serum lipid content acts to displace serum water and leads to an apparent decrease in serum sodium concentration. Hyponatremia of this kind is essentially asymptomatic and produces no complications save those that may accompany the hyperlipemia.

A primary water excess may develop in the presence of heart failure because of excessive water loading or the heightened activity of the posterior pituitary antidiuretic hormone. Rational therapy in this situation should be directed at restricting the intake of water in an effort to restore the volume and osmolarity of the body fluids toward normal.

Frequently in the course of chronic debilitating diseases, hyponatremia develops without the appearance of striking clinical manifestations. Total extracellular osmolarity is reduced and parallels the decrease in sodium concentration. Studies of body composition have demonstrated that this represents a new steady state in which the body tissues have equilibrated at a lower than normal osmotic level.⁴ Attempts to correct the hyponatremia by sodium loading are futile. If the underlying disease process improves, the low serum sodium concentration generally corrects itself spontaneously.

Finally, in the course of congestive heart failure, cellular osmolarity may become decreased as a result of potassium loss. This is reflected in

the extracellular fluid by a decreased sodium concentration. Potassium depletion may follow the use of diuretics, the kaliuretic effects of aldosterone-like compounds, and inadequate dietary intake. The administration of potassium salts may serve to repair this deficit and produce clinical improvement.⁵ In other cases, the ability of the cells to take up potassium is deficient and therapy with potassium results in hyperkalemia with its attendant toxic effects.

SUMMARY

Although hyponatremia is observed frequently in congestive heart failure, it rarely results from sodium depletion related to dietary salt restriction or therapy with natriuretics. It occurs usually in the presence of a sodium excess. Other factors such as hyperlipemia, primary water excess, potassium depletion, and altered cellular osmolarity appear to play the major role in the genesis of this condition.

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Clinical-Surgical Conferences



The Multiple Injury Patient

**Department of Surgery
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Moderator:

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**Director of Surgical Education
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Discussants:

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**Department of Diagnostic Radiology
Cook County Hospital**

Dr. Robert J. Freeark: Our subject today is a difficult and important one. The patient who has sustained multiple injuries is becoming an increasingly commonplace problem in the examining rooms, wards, and surgical sections of hospitals throughout this country. Accidents in high speed automobiles account for a considerable and enlarging percentage of these cases. Their not infrequent occurrence in the late hours of the day and on outlying highways thrusts the burden of their emergency care on smaller hos-

pitals without highly specialized personnel to handle them. That this emergent care may be the most important period in determining the patient's recovery seems obvious. Such emergency care may fall to any member of a medical or surgical staff and it behooves all of us, regardless of specialty, to prepare for our role in the management of these cases.

We are fortunate this morning in having with us men of national and international reputation in the management of trauma. Dr. Oscar P. Hampton, Jr., is a general surgeon gone sour in that he is now more closely allied with the field of orthopedic surgery and holds the title of assistant clinical professor of orthopedic surgery at Washington University school of Medicine. During World War II, Dr. Hampton served as a chief consultant in the European theater and did monumental work in the evaluation and care of extremity wounds. This morning he made grand rounds with us and discussed several complicated problems related to trauma. I can assure you that he is exceptionally well qualified in any of the phases of multiple injury that we may confront him with today.

Dr. Manuel E. Lichtenstein needs no introduction to this audience. He has been a key figure in surgical teaching and practice at this institution for many years. After completing his internship at Cook County Hospital, he served as an

associate to the late Dr. Raymond W. McNealy. He became an attending surgeon following his return from service with the Armed Forces where he was chief of a large evacuation hospital throughout most of World War II. A gifted teacher and surgeon, few have given more unselfishly of their time and talents to the patients and physicians of this institution than has he. On the last attending man's examination given by the Civil Service Commission, Dr. Lichtenstein wrote the top score in general surgery. He was unanimously elected to the position of Chairman of the Surgical Department by his fellow attending men.

We look forward to the comments of these two outstanding authorities.

Case History:

Dr. John Boswick (Surgical Resident): This 39 year old white female was admitted to the fracture service at 12:15 a.m. on November 22, 1958, in a comatose state, responding only to painful stimuli. The only history obtainable was that she had been involved in an automobile accident approximately one hour prior to admission.

Physical examination revealed an obese white female with a pulse of 132 per minute, blood pressure 80/50 mm. Hg, and a respiratory rate of 32 per minute. There were several small abrasions and lacerations over head and face. The abdomen was slightly distended with fullness in the left flank. There was generalized tenderness and rebound most pronounced in the suprapubic area. Bowel sounds were absent. The right thigh was markedly swollen and tender and bony crepitation was readily elicited in the upper one-third. The left lower extremity showed marked swelling, bluish discoloration, and tenderness

over the left trochanteric area. There was deformity and discoloration in the middle one-third of the left leg. The foot temperature was reduced, and no pulses were palpable below the popliteal area. The remainder of the physical examination, including pelvirectal, was otherwise negative. Catheterized urine specimen was grossly bloody. The blood hematocrit reading was 38 per cent.

Whole blood and nasal oxygen were started immediately. Multiple roentgenograms of the involved areas were taken. Emergency cystogram and intravenous pyelogram were performed by the urologic service after preliminary investigation of the bladder by the injection of sterile saline solution disclosed inability to retrieve more than one-third of the injected volume.

Dr. Freeark: We have asked Dr. Love of the department of diagnostic radiology to review the roentgenograms for us.

Dr. Leon Love: Multiple portable roentgenograms revealed a fracture of the upper one-third of the right femur with flexion and medial displacement of the proximal fragment. (Figure 1.) The left greater trochanter was completely avulsed, and a complete fracture of the superior and inferior pubic rami bilaterally was noted on the anteroposterior view of the pelvis. A complete comminuted fracture of the left tibia and fibula at the mid-shaft was present. (Figure 2.)

The lumbar spine showed complete fractures of the transverse processes of the 4th and 5th lumbar vertebrae on the right side. (Figure 3.)

A cystogram using 30 per cent diodrast was originally carried out. It demonstrated extravasation of radiopaque material outside the bladder consistent with rupture of the dome of the blad-

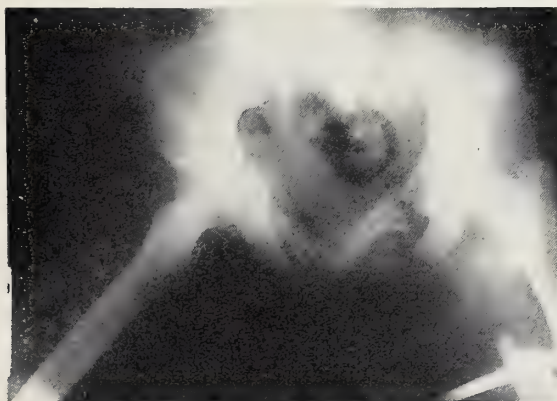


Figure 1

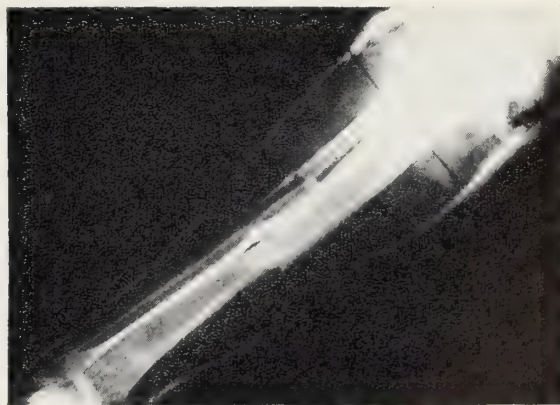


Figure 2



Figure 3

der in the vicinity of the left ureter. Free air was noted in the abdominal cavity, dissecting along the psoas muscle groups, but this may have been introduced in the course of the several bladder irrigations. (Figure 3.)

An emergency intravenous pyelogram showed function of both kidneys, although contrast visualization of the right pyeloureter was somewhat reduced and the distal ureter appeared displaced laterally and compressed by extrinsic pressure. (Figure 3.)

DISCUSSION

Dr. Freeark: In summary, we have a total of 10 fractures, gross hematuria, evidence of intracranial injury, paralytic ileus, and shock. The patient was seen in rapid succession by orthopedic, neurosurgical, genitourinary, and general surgical consultants.

Dr. Hampton, is this a multiple injury, and how would you suggest that it be handled?

Dr. Oscar P. Hampton, Jr.: This patient must certainly qualify as a patient with multiple injuries. In the management of any injured person, the prime objective is to save life. That may sound trite, but keep in mind that no matter

what the obvious injury, the first objective is to save life. The next is to save limb, and the third is to reduce morbidity and minimize the extent of temporary total disability and permanent partial disability. In this patient, as in any patient with multiple injuries, keep in mind that salvage of life is the first objective.

Dr. Freeark has made remarks about a man trained in general surgery going off into bone and joint surgery. Maybe I was scared out by some of the injuries that the cavity surgeons have to deal with.

In discussing this subject of multiple injuries, I would like to accompany my remarks with some slides illustrating, first, the general problem. I will come back to this particular case later. (Slides shown here) Stop and think what kills patients after acute trauma. The cause of death must come under three classifications: (1) Asphyxia, (2) hemorrhage, and (3) damage to the vital centers of the brain. The patient presented here was not killed immediately and it is our obligation to see that she does not die from her other injuries or their treatment.

The causes of asphyxia are numerous and often complicated. Patients will die who do not have an adequate exchange of oxygen and carbon dioxide. If they get oxygen and do not get rid of carbon dioxide, they die, and vice versa. Among things to be kept in mind are obstruction to the airways in unconscious patients. On rounds this morning the question was raised about tracheostomy in unconscious patients. What is its purpose? It is twofold: to keep the tracheobronchial tree free so the patient will not drown in his own secretions or aspirate vomited material and, second, to increase his oxygenation. Remember that the distance the oxygen must travel from the external nares into the lung fields is considerably longer than if oxygen enters through a tracheostomy and passes down into the lung. Pneumothorax, flail chest segment, and cardiac tamponade also will cause asphyxia and demand additional measures.

What can be done to minimize the consequence of hemorrhage? Arrest of hemorrhage is important. One can read arguments as to which is more important: restoration of airway or arrest of hemorrhage. In the individual case both may be equally compelling. To control hemorrhage, use compression bandages, clamp, tourniquet, or surgical intervention. One may also use the head-

down position to help combat the effects of hemorrhage but fat old ladies should not be held in the Trendelenburg position indefinitely because the diaphragm will get tired of pumping up the abdominal contents, aeration will be poor, and the aforementioned asphyxia may occur. The head-down position is valuable, however, for a short time.

The next important thing is the proper use of emergency splinting. I like to recount the British experience in World War I with fractured extremities. The British went into that war without splints for immobilization of fractures of the femoral shaft. Later they realized the necessity for them, and the mere addition of the Thomas splint to the armamentarium of these men reduced the mortality in fractures of the femoral shaft by 25 per cent. I scanned the X-ray films shown in this patient to be sure she was not going about without benefit of emergency splinting, and as far as I could see good emergency splints were on. An important part of the management of the patient with skeletal injury is emergency splinting; it is good preventive therapy. Continuing pain and loss of blood may cause the patient's condition to deteriorate, but with good splinting, pain and blood loss are minimized.

The later causes of death following acute trauma include brain damage, secondary shock with loss of extracellular fluid, kidney damage with loss of ability to excrete urine, intervening infection, or sepsis. You can classify most deaths that occur some time after acute trauma in one or several of these categories.

What are the lifesaving measures for the later causes of death? These include operative intervention in abdominal injuries to prevent peritonitis or control hemorrhage, debridement of extremity wounds, proper antitetanus therapy, replacement of whole blood loss, maintenance of electrolytes, and the countless details of pre- and postoperative care that have done so much for surgical patients.

I have not talked about preventing death from head injury. I take the stand that the most competent neurosurgeon in the world is ineffective for the patient with such a severe head injury that he is going to die within a short time after the injury occurs. That is the fellow who is going to die by the time you get him to the ward. I grant you that head injuries need ob-

servation, and that there is a place in selected patients for neurosurgical procedures in an effort to prevent death and decrease morbidity. But I decry the concept that has permeated American surgery that if the patient has been unconscious, one must lay off all the other injuries. I would rather see the head injury ignored than the remainder of the wounds. That is said with some degree of poetic license for emphasis, but don't hold back on what needs to be done for the patient because of a history of unconsciousness. If the patient has a head injury and there are focal signs that demand surgical intervention, such as extradural or subdural hematoma or depressed skull fracture, those things may take some priority in surgical intervention. If the brain is extensively damaged, there is some question whether neurosurgical intervention is likely to enhance the prospects for survival. On the other hand, patients will surely die from injury to a hollow viscus and that viscus has to be taken care of, regardless of the extent of cerebral damage.

Let us consider for a moment that we have a patient before us who has a head injury and is unconscious. There are no focal signs and there is nothing the surgical team can do but maintain fluid balance, see that the oxygen intake is good, perhaps do a tracheostomy. If the patient has an open fracture of both bones of the leg with extensive soft tissue damage, what should you do? You take that patient to surgery and minimize the blood loss with a good tourniquet and operate upon him. What is the anesthetist going to do? He is only going to give this unconscious patient oxygen, and he will have better oxygenation in the operating room than on his own in the ward. The anesthetist will keep the tracheobronchial tree clean through frequent aspirations of the endotracheal tube. He can assure complete expansion of both lungs. Prolonged deep anesthesia seldom is required. Doing the job that needs to be done with the patient with multiple injuries in the presence of brain injury is just good surgery. This is just as true in the abdomen or the chest as it is with the extremities.

As I observe multiple injury patients treated in various centers, it seems to me that this delay for purposes of neurosurgical observation repre-

sents the most common and serious error in management. Other omissions are worth emphasizing. I have already mentioned early and adequate control of hemorrhage by compression bandage or tourniquet. Most of the latter do more harm than good because they are misapplied. When only a tourniquet will suffice to control bleeding, it should be put on using a broad band of constriction, such as a blood pressure cuff, and it should be tight enough to occlude arterial flow and not merely venous return.

Shock due to blood loss should be treated vigorously with blood preferably, or plasma or plasma expanders until blood arrives. Don't get started on vasopressor drugs and reach for them first. They often only confuse and aggravate the clinical picture.

As I mentioned earlier, failure to splint the injured extremity adequately, both for purposes of transportation and after soft tissue repair, is a frequent serious error. Improvising splints with available materials may require considerable ingenuity but it must be done.

So if you are the first man at the scene of an accident or if you are the admitting doctor in the emergency room, you must constantly remind yourself of the major obligations to this injured patient: airway maintenance, hemorrhage control, application of clean or sterile dressings, and splinting of fractures where the patient lies. If these general principles are carried out, you will contribute greatly to the multiple injury patients' chance for survival.

I told Dr. Freeark and Dr. Boswick of a patient whom we were called on to manage recently. A young man received a crushing injury to his pelvis. I saw him soon after the injury. He was in marked shock. There was marked spread of the symphysis, hematoma in the groins, and both feet were pulseless, cold, and numb. But he could move his toes. First, a catheter was slipped into the bladder and nothing but blood was obtained. After adequate splinting of the fracture of the femoral shaft on one side, the color and pulse of the foot on that side improved slightly. Apparently there was spasm of the iliac vessel which caused the ischemic picture in the extremity. The patient was taken to the operating room where resuscitation was continued. When the urologist arrived, he insisted upon a cystogram and he felt that was the first thing to do. It showed

a nice pear-shaped bladder with a little trickling of contrast material down one corner. The urologist said that indicated a little rupture but that the patient did not need a cystostomy and a Foley catheter would control it. Surgery was performed principally to restore circulation in the right lower extremity and arrest hemorrhage. A right sided extraperitoneal exploration was carried out with inspection of the iliac vessels and adjacent fracture area. After surgery the man was returned to the ward and continued to develop signs of hematoma that dissected up the abdominal wall, filled the scrotum and penis, and required considerable blood to keep him going. Later he was re-explored to control the hemorrhage, and at this operation a great big hole was found in the bladder that you could put three fingers in.

My point here is that a cystogram is fine, but if you have a ruptured pubic symphysis with marked bloody urine, let the urologist have his cystogram but somebody get a cystostomy tube in the bladder so that the man will have a free flow of urine. Repair of the bladder wall is not essential, but getting a cystostomy tube in and exploring the area to control hemorrhage are essential. It is unusual to have a continuing hemorrhage in a closed space. This one was difficult to control; it required ligation of the internal iliac artery. If the slightly abnormal cystogram in that case had not masked the situation, the first exploratory approach would have been through the midline of the abdomen. There was no free blood in the peritoneal cavity but the incision should have been made in the midline to permit adequate inspection for leakage of urine and for the site of hemorrhage around the neck of the bladder.

Now for your problem case. The patient in our protocol is a comatose patient, which fact I shall choose to ignore except for continuing essential observations. I believe there are more life endangering situations that show up in the remainder of the protocol. The splinting of the fractures of the thigh and leg is all that one would expect to do initially. This is a closed injury and definitive management of the fracture of the femur and tibia are postponed until the life endangering injuries have been taken care of. We have, in addition, a reduced foot temperature and absent pulse. This is an important observation but I think still takes a reduced

priority over several things in the protocol, for instance, the grossly bloody urine and a hematocrit of 38 per cent. The patient was in shock. There was fullness in the left flank. The abdomen was distended and silent, and this patient needs a cavity surgeon and not a neurosurgeon. I would prepare her for immediate exploratory laparotomy.

Dr. Boswick: After the urologic service established the presence of rupture of the bladder and following rapid improvement in the vital signs on blood transfusions, the patient was taken to surgery. A large rent in the dome of the bladder was closed with two layers of interrupted catgut, and suprapubic cystostomy was done. The fractures of the leg were enclosed in plaster, and she was placed in a Thomas splint for the femur fracture. Her pelvic fracture was treated conservatively with a sling and traction on both lower extremities. Immediately after abdominal exploration and for several days postoperatively, the patient continued to show a severe paralytic ileus. The general surgical service followed her closely for several days while still in traction. On the fourth postoperative day she was started on liquid feedings and gradually this was increased until she was on a general diet. Two weeks after surgery an open reduction of the femur fracture was maintained by use of an intramedullary rod. Her recovery has continued satisfactorily.

Dr. Hampton: Was the peritoneal cavity opened?

Dr. Boswick: Yes, and carefully explored. No free hemorrhage, fluid, or air was found and all intraabdominal viscera were intact.

Dr. Hampton: Do you abdominal surgeons have any hesitancy in doing a cystostomy for ruptured bladder at the same time you explore the abdominal cavity? (No) I wouldn't either. I am surprised, however, that you did not find more in the belly. What about the fullness in the left flank?

Dr. Boswick: There was some retroperitoneal hematoma and considerable extravasated urine.

Dr. Hampton: One thing that could have killed this patient would have been a ruptured hollow viscus and that was eliminated by exploration of the abdomen. Sepsis and mechanical block to urinary flow were similarly avoided. The management of the extremity injuries by

good splinting was an effective measure and tended to be in the patient's best interests. Your definitive management of the fracture is standard. You chose to classify this as a stable type of fracture of both bones of the leg and treated it with plaster immobilization. You used an intramedullary nail on the fracture of the femoral shaft on the right. What about this absent pulsation in the left foot?

Dr. Boswick: It returned promptly after adequate splinting and restoration of blood volume. The foot is warm and appears normal.

Dr. Hampton: Clinically there was adequate circulation to the foot? (Yes) Then why was the pulsation in the foot reduced in volume?

Dr. Boswick: The fractures were comminuted and at first there was fullness of the left flank. It is possible that the hematoma caused pressure on the iliac vessels and tended to limit arterial outflow.

Dr. Hampton: I think what actually happened was a spasm of the vessel. If you think these vessels cannot go into real spasm you should watch them at surgery and see the spasm. I would think this woman had spasm of the peripheral vessels at the level of the fracture and that after immobilization, with relief of pain, the pulsations came back. It is true that foot pulsations are not easy to obtain in a person whose blood pressure is 80/50, and that might be the explanation.

Dr. Freeark: We are also honored today to have with us Mr. John Griffiths, a surgeon from St. Bartholomew's Hospital in London, England.

Mr. John Griffiths: I enjoyed and agree heartily with Dr. Hampton's remarks. There is one point I would like to emphasize and that is the vascular component to this injury. During the war we saw a tremendous amount of limb damage and spasm of the vessels was frequent. Many times after operation they came back but in some cases, where the limb was ignored, ischemia of the foot would remain. This would occur in young people particularly, and the question was, what is the cause? At times the pulse returned as low as the popliteal vessel, but the end result was the type of contracture you see in fractures of the elbow and the ischemic changes were the same as encountered in similar vascular injuries or prolonged spasm. The changes are often permanent. After the war, research teams tried to

determine why postinjury spasm occurred. They showed that you could at times relieve spasm by incising the fascia and exposing the artery. On occasion we found that after exposing the artery, spasm remained. We did a stripping of the artery or a sympathectomy type of operation but it still remained. Then we did some experiments on rabbits and learned that spasm could be reduced by putting papaverine on the vessel. Since that time we have been looking for cases to try it on but they are uncommon. We seldom see cases of spasm producing ischemia without demonstrable pressure. There was no demonstrable pressure in the case presented today. The fact that you have a popliteal pulse but not a tibial pulse is typical of this type of phenomenon so what might have happened here is spasm that relieved itself. But I would point out that if the spasm had not relieved itself, it might have been well to expose the vessels in the area of the bifurcation of the popliteal and put papaverine directly on the artery. Papaverine put into the artery does not dilate the vessel; it has to be perivascular infiltration. How does it work? We don't know but it seems to have a local action on the musculature. It has no effect except by direct application. The stripping of the vessel of its covering, taking all the sympathetics off, does not accomplish this effect on the vessel.

Dr. Frank Theis (attending surgeon, Cook County Hospital): Do you use this any place on the artery?

Mr. Griffiths: It is used preferably at the site of injury.

Dr. Theis: How do you know the site?

Mr. Griffiths: In many of these cases you can trace down until you feel pulsations stop and the point of spasm is there. This may be the initiating point. The area which is thought to be damaged usually is the area at which the fracture has caused some concussive or constrictive injury.

Dr. Manuel E. Lichtenstein: Dr. Hampton does not know me as a cavity surgeon. We met in North Africa. He had a large hospital that received casualties from the African campaign and he did orthopedic work there. I followed his work throughout World War II in Italy and then he became consultant elsewhere. He did an outstanding job during the war. He actively participated in bringing competent surgery closer

and closer to the front lines so that the injured were treated as soon after injury as possible. He keeps talking about the importance of that practice, but sometimes the voice falls on deaf ears.

The best results even by the cavity surgeons, in injury to the bowel, for instance, were obtained when peritonitis was prevented by early operation. The patient who is allowed to wait until he improves never improves. As peritonitis progresses, it may be impossible for the patient to get well. He will go deeper and deeper into shock and, while you wait for him to come out, the effects of shock will keep him in that state. The outlook will be better if you can operate upon the patient early so that peritonitis can be controlled by removing the focus or closing the leak. That is standard treatment. The quicker you do that, the sooner the patient will survive peritonitis.

In extremity wounds, continuous bleeding of the raw surfaces puts the patient into shock from which it may be difficult or even impossible for him to revive. During the war if we waited for a consultant to be brought up to the general hospital or evacuation hospital, the time element destroyed the patient. It was necessary to bring the surgeon out closer and closer to the aid stations at the front to give the patient immediate attention and to prevent him from going into shock from infection, loss of extracellular fluids, or trauma, and to relieve the spasm producing reflexes that developed. In that way, better results were obtained.

The one thing that must be learned in these injury cases is: the absolute need for immediate treatment. There is always the problem of resuscitation. Resuscitation is the blanket that covers the whole patient until he gets out of the hospital. You are always resuscitating the patient. It is not a separate item of treatment. The definitive work is done in order to make resuscitation possible. This comes from good clinical research done by Dr. Hampton and a team of research workers in extremity wounds. They had with them abdominal and thoracic cavity surgeons.

I listened with interest when Dr. Boswick said that after the bladder was explored the patient was turned over to the general surgeons because of a persistent ileus. I hope he doesn't mean that the urologist does not know what to do with a paralytic ileus. That is another thing

you must learn in acute trauma: every patient who has trauma will develop paralytic ileus. Never feed a patient who has been severely injured, even if the abdomen was not even touched, because he will get acute dilatation of the stomach with ileus. Do not feed such a patient or even give him water to drink. Keep the stomach empty. That not only gets him ready for surgery but keeps him from stagnating material he has just eaten. Every patient must be presumed to have developed paralytic ileus following trauma and should receive nothing by mouth until the bowel sounds are adequate. Intravenous fluid should be administered, but absolutely nothing by mouth. And you don't have to call a general surgeon to listen to the abdomen and tell you what it is doing and when it is ready for a diet.

Dr. Raymond S. Van Harn (visiting M.D.): I come from a small community with a 600 bed hospital. I was introduced to multiple injuries 5 years ago when we had 1,600 patients in two hours following a tornado. The only point I want to make in reference to multiple injuries is that we made many mistakes that night because we tried to do too much. We sutured lacerations that should not have been sutured because we did not have facilities or time to cleanse them and close them under aseptic conditions. We spent our time trying to suture simple lacerations, and patients died from lack of airway maintenance or blood loss. Other mistakes we made were doing open reductions on severely comminuted open fractures with considerable loss of time and operating room space. But worst of all, we sutured lacerations and missed the really important wounds.

Dr. John B. O'Donoghue (attending surgeon, Cook County Hospital): I would like to have Dr. Hampton express his philosophy in the matter of treatment of shock in these multiple injury cases. How long should we persist with this

treatment when the patient fails to rally from the usual restorative measures? I am sure we often delay definitive treatment for these people in shock too long.

Dr. Hampton: I have confined my remarks to extremity problems but I know what Dr. O'Donoghue means. Wound shock or traumatic shock is a secondary phenomenon due to loss of fluids from the circulating blood volume. This may be hemoglobin containing fluid which will produce shock, or it may be an extracellular fluid loss. The approach to the problem, as I see it, is over-all restoration of what has been lost from the circulating blood volume, be it hemoglobin containing fluid or sodium containing fluid or plasma. The other measures that I attempted to show in the emergency medical care are important: Dressing of the wound with good compression bandages to minimize loss of blood and tissue fluids; put the extremity at rest with good emergency splints so there will not be continual thrashing around of the part which allows more loss of blood from the bone ends and loss of extracellular fluids. Never negate the loss of extracellular fluids into the thigh from fracture of the femoral shaft. In brief, the things to remember are splinting, compression dressings, control of hemorrhage, restoration of fluids, and head-down position. If you have done all that and have supplied back into the circulation what is a reasonable replacement of the fluid which presumably is lost in the traumatized area, and if the patient's general condition is not improved, that is the time to make surgery a part of resuscitation.

In closing, I want to point out that the multiple injury patient usually is a young person. When you save the life of such a patient, you restore a useful citizen for many years to come. So save that trauma case by thoughtful and aggressive action. Be a surgeon with the objective of saving life.

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A gel diffusion serologic test for the diagnosis of tuberculosis

The results of serologic tests—as used for the diagnosis of infectious diseases—are difficult to interpret. At best, they furnish only indirect evidence of the presence of microbial etiologic agents. They also are subject to marked variation, depending upon the amount of the antigenic stimulus and the capacity of the particular host to produce circulating antibody under the conditions extant at the time. In addition, the presence of significant amounts of antibody in the serum may not reflect the presence of active disease but merely a previous clinical or subclinical contact with the etiologic agent or, in diseases where such prophylactics are commonly used, a prior vaccination.

The problem is more difficult in tuberculosis than in most infectious diseases since a large proportion, frequently a majority, of the human population has had sufficient previous contact with typical or atypical tubercle bacilli to induce tuberculin hypersensitivity. They, therefore, may have antibody that can be detected by serologic tests. In fact, serologic tests such as complement fixation and hemagglutination lack diagnostic usefulness because they frequently detect antibody in the sera of many people who have a sensitivity to tuberculin but have no evidence of active tuberculous disease.

A new approach to the problem of the serologic

diagnosis of tuberculosis recently has been provided by the work of Parlett and Youmans, who have utilized a gel double diffusion precipitation test for the detection of antibodies against *M. tuberculosis* in the serum of human beings. This simple test is performed by allowing antibody (patient's serum) and antigen (prepared from cultures of tubercle bacilli) to diffuse into opposite ends of a short column of neutral agar contained in a capillary tube. Where antigen and antibody meet in the agar a band of precipitate will form. This is a highly sensitive technique for the detection of precipitating antibody. With a suitable antigen preparation, as many as six separate antibodies may be detected in the serum of some tuberculous patients.

In a recently completed large scale double blind evaluation study, the test showed a high degree of specificity since about 98 per cent of clinically nontuberculous people were negative. On the other hand, a large proportion of patients with known tuberculous disease were positive by this test. Of great importance was the demonstration that the majority of tuberculin positive but clinically nontuberculous patients reacted negatively.

Certain technical problems concerned with standardization of the antigen remain to be worked out before this test can be recommended as a routine laboratory procedure. Also, more data are needed before the usefulness of this test for the detection of active tuberculosis can be

completely defined. However, both the technical simplicity of the test and its high degree of specificity suggest that it may find some area of usefulness in the detection of active tuberculous disease.

Guy P. Youmans, M.D.
Professor and Chairman,
Department of Microbiology,
Northwestern University
Medical School

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Dr. Smith goes to work

Dr. Austin Smith has found himself a lively job as new president of the Pharmaceutical Manufacturers Association. Most of the first month was spent on planes going to and from meetings and speeches, including a week-end trip to Buenos Aires. He had the job of organizing the office, preparing for board meetings. In addition arrangements had to be made for receptions given to government officials and executives in related fields. As the No. 1 spokesman for the industry, Dr. Smith is taking over at a time when pharmaceutical patents, prices, and promotion are under public and government scrutiny. But Dr. Smith is not suffering from any delusions; he does not anticipate overnight miracles. He expects to tackle problems as they arise.

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Keep up with progress

The public appears to be more convinced of the value of a complete physical examination than do many physicians. At least, many individuals complain they cannot sell their physicians on the idea. When some patients ask for a thorough checkup many are told that they are healthy, do not need it, or to forget it. Criticism along this line is mounting and it is time for the medical profession to decide whether an annual examination is necessary and should be encouraged or whether it is unnecessary and should be discouraged. This is a matter that cannot be agreed on in principle without being carried out.

If organized medicine decides that such examinations have merit, let's set aside an hour or two for this type of work in much the same way we set aside time for hospital rounds, office calls, or part time industrial work.

Most laymen know also what to expect from a complete examination and the busy practitioner

who tries to cut corners is riding for a fall. There is no substitute for a complete examination. Most patients expect more and are willing to pay for more. The time is past when we can practice down to our patients. It is foolhardy for the physician to under-estimate the knowledge of the average layman. They expect the medical man to do more than listen to the heart and check the blood pressure and pulse.

The little knowledge of the layman may become a dangerous thing unless the physician keeps abreast of the times. The layman hears and reads about cancer detection and special examinations and equipment but this information is of no value to him if he cannot get such service. Others may be recruited to do these examinations unless the practicing physician equips himself for such service and gives the necessary time to it.

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Editorials from other journals

Lead, kindly light

Closer ties between family doctors and experts on disease—an innocent but invidious suggestion—is the desire of the American Cancer Society as reported in the *New York Times* on January 31, 1959. The community physician (latest arrival in the general practitioner-family doctor-generalist series) was the target of an area meeting sponsored by the Society in New York on January 30 as part of an effort to improve its professional education program.

The family physician, it was correctly stated, must be made as completely cancer conscious as possible if the purposes of the Society are to be realized and the specialist is brought into the picture early enough to be of value. Possible ways of inducing the general practitioner to keep up with the science of his art were suggested:

The publication of the names of physicians participating in continuing medical education programs—(About Ben Adhem's book of gold).

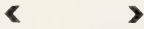
A rule making membership in medical societies contingent on each participation.

A rule making licensure renewal contingent on such participation.

The suggestions raise the question, not entirely academic, where the line should be drawn between requiring safe standards for medical licensure and medical society membership, and the

exercise of a policing authority in the establishment of regulations regarding postgraduate medical education. Of the three suggestions the last two suggest constabulary action by a medical hierarchy that might conceivably be resented by the regulated rank and file.

Intelligent and inspiring leadership, pleasant encouragement, and persuasive educational methods can still accomplish more than the swinging of truncheons, age old and stubbornly held beliefs to the contrary notwithstanding. Honey still attracts more flies than vinegar. *Editorial. New England J. Med. Mar. 12, 1959.*



Council meeting minutes

The regular April meeting of the Council was held at the Hotel Sherman, Chicago, on Sunday, April 26, with the following present: Oldfield, O'Neill, Mason, Youngberg, Kirby, Hesselstine, Reichert, Portes, Blair, Endres, Reisch, DuPuy, Goodyear, English, Montgomery, Fullerton, Hamilton, Reavley, Hopkins, Cannady, Sheehe, Limarzi, Cross, Van Dellen, Bennett, Burdick, Mantz, Scatliff, Bettag, Mrs. Endres, Scott, Neal, Oblinger, and Mirt.

MOTION: (Fullerton-Piszczeck) that the minutes of the March 8 Council meeting be approved.

Dr. Hesselstine asked that page 12 be corrected to read: "The Committee recommends that the Council approve this outline in principle, and that such a retirement program be put into effect by May 1, 1959, or as soon thereafter as practical", rather than January 1, 1960 as it reads now.

Motion carried as amended.

MOTION: (Fullerton-Piszczeck) that the minutes of the special meeting held in Springfield on March 31 be approved as mailed. Motion carried.

President's Report

Dr. Oldfield reported as president. He thanked Dr. O'Neill for representing him at the legislative dinner in Springfield on March 31; and also thanked Dr. Lorne Mason for representing him at the Missouri State Society annual meeting.

Among the meetings Dr. Oldfield had attended since the last meeting of the Council were: April 1, the Committee on Industrial Health to consider panels for impartial testi-

mony; the Health Insurance Council (a group of some 65 companies that are anxious to co-operate with hospitals and medical societies to work out some plan to provide private insurance coverage for older citizens). April 7, a meeting of the Past Presidents' Club of the Aux Plaines Branch; also a meeting with Mr. Edlund. April 11, a meeting with the nurses; April 13, the Physicians' Club of Oak Park; April 14, the CMS Council; April 24, the Aux Plaines Branch; and the usual meetings on the day before the Council meeting held here at the hotel.

MOTION: (Piszczeck-Fullerton) that the report be accepted.
Motion carried.

President-Elect

Dr. O'Neill reported as president-elect. He commented on the excellent program and dinner held in Springfield on March 31. The namespeaker brought out the attendance and provided an excellent program that contributed to the success of the dinner and the evening. The meeting the next day at the Abraham Lincoln, a joint affair with the Illinois Hospital Association, was an excellent session, good attendance, and well planned effort.

MOTION: (Piszczeck-Fullerton) that the report be accepted.
Motion carried.

Chairman of the Council

Dr. Montgomery reported that the executive committee had met the night before. A report from Mr. Edlund relative to the management survey will be furnished some time in May, and a copy will be available for the members of the Council. After the report is considered by the Council, it may be advisable to call a special meeting of the House of Delegates.

The special award committee to purchase prizes, set up the details, and handle the drawing at the annual meeting was selected as follows:

Drs. Fred C. Endres, Chairman, Carl E. Clark, and Caesar Portes

A letter has been received from the AMA announcing that the Illinois State Medical Society is entitled to an eleventh delegate and alternate to the AMA House based upon the membership on December 31, 1958 of 10,200. This eleventh delegate and alternate will be elected by the Chicago Medical Society.

The Nursing Committee is requesting certain legislation to help them establish schools of nursing as a part of the junior college program throughout the state. This request has been turned over to the Committee on Medical Service and Public Relations.

Committee on Aging

Dr. Cannady, as chairman of the Committee on Aging, reported as follows: Although the Committee has held no formal meetings since the report made to the Council on March 8, 1959, the activities of the committee have continued. At the Council meeting on March 8, six recommendations were made and all of them were approved.

1. The Council approved a one day conference on aging. Preliminary work has begun, and a meeting of the committee will be held during May to discuss the date, location, and program. The conference is to be held either in September or October, 1959. The committee will welcome suggestions.

2. Governor Stratton was notified by Dr. Camp of the decision of the Council to participate in state conferences preceding the White House Conference on Aging in 1961. A letter was received from Dr. Otto L. Bettag stating that the Governor had appointed him, Dr. Cross, and Mr. Peter Cahill to work with the U. S. Department of Health, Education, and Welfare in connection with the White House Conference, and that he would be pleased to have the chairman of the Committee participate with them whenever possible.

3. The Council approved participation in the formation of a State Joint Council on Aging. The Illinois Hospital Assn. and the State Nursing Home Assn. have accepted the invitation to participate; the Illinois State Dental Society Board will meet on May 11, and their acceptance is expected.

Two representatives of each organization will be invited to attend an organization meeting during the week of the annual meeting. At that time, it is expected that temporary officers will be selected and program, finance, and budget committees will be appointed.

Howard Wells, Jr., executive secretary of the National Joint Council, will explain the functions of a state council. After this meeting, there will be no further activity of the State Joint

Council until the conclusion of the First National Conference in June, 1959.

If the Council approves, two members of the Committee (one from downstate and one from Chicago) will represent the ISMS at this organization meeting. It is hoped that the president and secretary of the ISMS will be able to attend future meetings of the State Joint Council. (Dr. Lee Strohl of Chicago and Dr. E. W. Cannady of East St. Louis will be the official representatives.)

4. The Council approved the suggestion that papers sponsored by the Committee on Aging be published in the Illinois Medical Journal four times a year. The first paper will be a general one discussing "Medicine's Approach to the Problems of Aging." Dr. Cross and his department are preparing a paper on the activities of the department with special emphasis on nursing home standards and licensing. Subjects for further papers will be discussed later.

5. Dr. Camp notified the Postgraduate and Scientific Service Committee that the Council approved the recommendation to include the subject of aging at postgraduate conferences.

6. The descriptive literature on the book "Strike Back at Stroke" has been mailed by Dr. Camp's office to 6,000 physicians in Illinois. The complete mailing was delayed because the USPHS did not send the inserts in sufficient quantities. The mailing also included a letter from the Committee on Aging. Since the mailing Dr. Ruth Church has received over 300 requests for the book.

In a recent communication from the National Joint Council to Improve the Health Care of the Aged, the ISMS was invited to send representatives to the First National Joint Council meeting to be held in Washington, D. C., in June, 1959. At least two representatives of the ISMS are expected to attend, and the executive director of the Joint Council informed Dr. Cannady that it is hoped that in addition to the two official representatives, a number of the key officers of the State Society will also attend. If the Council approves, the two representatives of the ISMS to the State Joint Council will be requested to attend the Washington meeting.

(Dr. Lee Strohl of Chicago and Dr. E. W. Cannady of East St. Louis.)

The Committee on Aging is aware of the problems regarding effective methods of financing

health care of the aged. The proposal adopted by the AMA House of Delegates in December, 1958, regarding the development of an effective voluntary health insurance or prepayment program for the group over 65 with moderate resources or low family income, was mentioned at the January meeting of the Committee on Aging. You are aware that the proposal stated that physicians should agree to accept a level of compensation for medical services rendered to this group which would permit the development of such insurance and prepayment plans at reduced premium rate. The committee has had no further discussion regarding this proposal. However, it is my understanding that the Committees on Aging of some state medical societies have studied the proposal and have made recommendations to their respective societies.

If the Council directs, a special meeting of the Committee on Aging will be called before the meeting of our House of Delegates in May to discuss the AMA proposal and to make a recommendation to our House of Delegates.

Dr. Cannady discussed several bills pending before the 71st General Assembly which dealt with work in the field of geriatrics, the licensing of homes for the care of the aged, and a bill that would provide recreational facilities for residents "60 and over".

Dr. Hopkins felt that the Council should express approval of the development of a resolution relative to an effective voluntary health insurance or prepayment program for the group over 65 with moderate resources or low family income. Additional work on the part of Blue Cross-Blue Shield will be necessary in developing such a program, and a recommendation from our House of Delegates would give these various plans something with which to work.

MOTION: (Kirby-Fullerton) that such a resolution be developed by the Committee on Aging, and consultation be given the committee by the Committee on Medical Service and Public Relations. Motion carried.

Dr. English stated that it was his opinion that Dr. Cannady should have a meeting of his committee before the annual meeting; Dr. Hamilton agreed, and stated the Committee should be given the power to proceed. Dr. Cannady said he would plan such a meeting on Mon-

day, and would welcome the attendance of officers and committee members.

NOTE: A letter from Dr. Cannady received May 1, states that the meeting will be called for 2:00 p.m. on Monday, May 18 in the conference room of the Chicago office at 185 North Wabash Ave.

MOTION: (Piszczeck-Fullerton) that the two representatives of the committee be authorized to attend the meeting in Washington, D. C. Motion carried.

M.S. & P.R. Committee

Dr. Hopkins stated that there had been such a lack of interest, and so few nominations for the Health Progress Awards that the committee would recommend that none be given this year.

MOTION: (Hamilton-Piszczeck) so move. Motion carried.

PR dinner

The cost of the dinner for the PR committee on Monday night should be determined. The committee recommends that the Council authorize the sale of the tickets at \$4.00, and the Society absorb the balance of the cost of the meal. The program will be put on by the Chicago Bar Assn. and the Chicago Medical Society committee.

MOTION: (Piszczeck-Fullerton) that the dinner tickets be sold for \$4.00. Motion carried.

A detailed discussion of various bills sponsored, approved, or disapproved by the Society followed.

S.B. 662 which provides that narcotic addicts may be treated for their addiction in a private hospital or sanitarium licensed by the State Department of Public Welfare, was approved.

HB 188—a proposal that would provide a mandatory life sentence for the sale or dispensing of narcotic drugs to minors—was opposed on the grounds that it serves to hinder medical investigations into the causes of addiction.

It was recommended that the Society endeavor to provide that the Necropsy Board be established by law, and that this matter NOT be left to the discretion of the Director of the Department of Public Health.

MOTION: (Kirby-Fullerton) so move.

Motion carried.

Dr. Hopkins stated that the committee was opposed to further use of funds for BCG vaccine; therefore, they recommend that SB 276 be opposed.

MOTION: (Hamilton-Endres) so move.

Motion carried.

Hopkins stated that HB 433 provided that a new prescription must be secured in order to duplicate eye glasses. The committee recommended opposing this bill.

MOTION: (English-Endres) so move.

Motion carried.

HB 1017 (introduced by a physician) provides that antibiotics may be used in the eyes of the newborn. The committee recommends that HB 1017 be amended to read "acceptable antibiotics approved by the Director of the Department of Public Health, or some other agent". Dr. Reichert stated that it should read: "silver nitrate or some acceptable antibiotic". He discussed sensitivity to the antibiotics and the fact that the Illinois Society for the Prevention of Blindness would oppose the bill.

MOTION: (Portes-English) that the Society oppose the bill.

Motion carried.

Oblinger outlined the proposed bill that would legally establish and outline "privileged communications" between physician and patient under the law. He stated that as a matter of ethics the physician-patient relationship is established, but this relationship is not recognized in common law. He stated that the bill will exempt cases which involve 1) in cases of homicide; 2) by express waiver of the patient; 3) in all mental illness hearings; 4) in cases of malpractice suits against the physician; and 5) in cases where the patient brings an action and his mental or physical condition is the ultimate fact in issue.

MOTION: (Piszczeck-Fullerton) that the recommendation of the committee be approved, and the bill introduced. Motion carried.

HB 1018 was discussed by Dr. Reichert, who felt that health education and instruction for teachers were most important.

MOTION: (Reichert-DuPuy) that the society oppose the elimination of health instruction in our teach-

ers' courses. Motion carried.

Mr. Neal stated that he had been meeting and working with Dr. Bennett on the Workmen's Compensation problems; that HB 6 and HB 156 are securing support from educational sources (these bills provide a means for testamentary disposition of the human body or any part thereof).

Dr. Hopkins asked that a letter of appreciation be sent to Dr. Lull for his assistance in securing Lt. Cmdr. John Ebersole as the speaker for the legislative dinner in Springfield on March 31.

MOTION: (Hamilton-Reavley) so move.

Motion carried.

PG & SS Committee

Dr. Limarzi reported that the Postgraduate and Scientific Service Committee had held one additional postgraduate conference at Moline. The program over a Chicago radio station is progressing nicely.

Industrial Health

Dr. Bennett presented a progress report. The committee has held two meetings since he last appeared before the Council. At a meeting in Minneapolis which he had attended, nine judges were present; he also attended a meeting in Pittsburgh of the American Bar Association. On April 1, the Chicago Association of Commerce and a group of other organizations sponsored a meeting to bring the work of this committee in the field of impartial testimony out into the open. The newspapers co-operated beautifully, and at this meeting, 36 people were present. Representatives of the Illinois and the Chicago Bar Associations, the Illinois and the Chicago Medical Societies, attended. On April 2, there was an open meeting at the Morrison Hotel; 10 judges were present (three federal and seven from the superior courts). The luncheon was attended by 225.

Rule #35 having been amended, certain areas exist now where federal courts are ready to use panels. This is true today in Philadelphia.

On May 7, Dr. Bennett will talk to a meeting which will be attended by federal judges from Wisconsin, Illinois, and Indiana, and also state judges from this area. On June 4 and 5, a meeting will be held in Chicago when all these areas will be represented. They have asked Dr. Bennett to talk at that time, and they will ask if our panels are ready.

Our committee selected 196 people for these

panels. Letters have been sent and 146 replies have been received. We have 4,000 names which the physicians have recommended for these panels, and there is no question of who was desired. The committee has suggested 14 panels, and we will use people who know their specialty and who are absolutely impartial in their judgment.

Dr. Bennett presented maps of the state of Illinois broken into various geographic areas where these panels might be established. He felt that the areas should be handled locally and that they must cover the testimony by use of qualified men. There are 124 judges in Illinois, and it was the opinion of the men that the geographical areas should correspond to those with which the judges are familiar.

MOTION: (Hamilton-English) that the Council approve in principle the panels as set up by the committee. Motion carried.

Dr. English stated that the setup along the line of judicial districts seemed the most logical, since the judges would be familiar with this geographic division.

MOTION: (Blair-Fullerton) that the committee be empowered to proceed along channels already set up and outlined. Motion carried.

Dr. Bennett stated that the committee would have a captive audience at the meeting in Chicago on June 4 and 5 when 124 state judges would be present. The Illinois and Chicago Bar Associations want a new court house and 50 new judges to expedite the work accumulated. The work of the panels in providing impartial testimony would expedite work, and we may secure support from this area.

On June 4 and 5, we have the American Bar people from Los Angeles, Philadelphia, and New York, to present the problem to these judges and to indoctrinate them in the advantages of the use of panels to provide impartial medical testimony.

Would the Council want to have our panel members in and permit them to hear these men—already in Chicago? A dinner meeting would be the only expense, since these speakers will be in Chicago for the other meeting. There are 125 panel members involved, and perhaps some 60-70 would attend.

Discussion by Hopkins, English, Hesseltine, etc., relative to advantages, cost, etc.

MOTION: (English-Hamilton) that the Council authorize the Committee to sponsor such a dinner meeting, and that the ISMS pay the dinner expense. Motion carried.

IPAC

Dr. Montgomery reported as chairman of the IPAC committee. The regular meeting was held Saturday afternoon, and for the second time, a hospital was removed from the approved list. The former hospital removed from the list by the IPAC sued the commission, and the Supreme Court upheld the action of the Commission.

The committee put in a request for an increase in fees, and the Commission put the request in a special budget. The Governor in his message, omitted it from his report. The committee asked that this be reconsidered, and that the Commission pay the increased fees from its present budget and request a deficiency budget later. The commission requested that the Council or the committee write to the Governor and explain to him the situation in Illinois and get an agreement that the commission go ahead and give the physicians the requested increase in fees.

Radio "Shorts"

Dr. Reichert reported that the president of the ABC radio stations in the Chicago area met with Dr. Hirsch, Dr. Bundesen, and himself and asked that 100 short sentences be prepared to be used as filler announcements over the air dealing with polio shots, polio vaccine, etc. Starting next week, some of the best publicity we could possibly have will be provided free of charge over radio stations.

Legislative Dinner

Dr. Reisch outlined the legislative dinner held in Springfield on March 31; 272 attended: 32 senators and their wives; 118 representatives and their wives; 63 state officials; and 59 physicians. We feel that there should be better representation from the physicians, and we hope to develop this interest before the next session of the legislature two years from now.

Dr. Lorne Mason attended the annual meeting of the Missouri Society recently. There are some 3,500 members and only about 400 were

in attendance. The exhibitors expressed disappointment. The state society has a speaker and a vice-speaker for its House and three lay secretaries, one of whom acts as field representative for the society.

Hospital Meeting

Dr. Hesseltine reported that he felt the joint meeting with the Illinois Hospital Association in Springfield on April 1, was a success; 300 people attended and about 140 hospital administrators, etc. When the meeting adjourned (on time) about 80 per cent of those who came to Springfield were still in attendance. It is difficult to evaluate how much this meeting accomplished; however, enthusiasm was expressed; speakers from downstate provided the panels and the workshops; the consensus was that the meeting was worthwhile, and the joint session should be repeated. The administrators are more or less permanent; the chiefs of staff change. The luncheon was paid for by each individual, but there will be some expense for rooms, etc.

Dr. English said he had talked to some of the physicians present at the joint conference, and it was their suggestion that at the next joint meeting, the trustees also should be included in the invitation (or the chairmen of the hospital board).

Nursing scholarships

Dr. Fullerton reported that in his county the two hospitals have organized a group which they call "Guardian Angels", and a membership costs \$30.00. The funds raised in this manner are available for nursing scholarships. His own hospital has a class for future nurses composed of high school students interested in going into nursing as a career. They are given 40 hours of classroom instruction after school at the hospital, and then 40 hours of work on the floor. All of last year's group went on into the study of nursing, and this year all have applied for nurses' training.

Public Health

Dr. Roland R. Cross reported as director of the Department of Public Health. Statistical records in the State Department of Public Health suggest that the widespread and growing interest in geriatrics and the care of the elderly peo-

ple. About 100 persons, for example, attain the age of 100 every year in Illinois. More than 3,000 attain the age of 90; while upwards of 20,000 attain the age of 80. In 1920 only about 9 per cent of the people who died in Illinois had attained the age of 80. Last year somewhat more than 20 per cent of those who died were at least 80 years of age. About one-fifth of the people who died in Illinois in 1957 were at least 80, while more than one-half had survived their 65th birth anniversary. Approximately 1,000,000 people in Illinois are now 65 or over.

A recent study by the Health Information Foundation reveals that persons 65 and over make out-of-hospital professional contact with physicians about eight times per year on the average. At that rate, every physician in Illinois would on the average, be consulted a total of about 800 times per year by persons in the 65 and over age group, exclusive of hospitalized patients. This gives a tangible idea of the magnitude of the geriatrics problem in Illinois, and it will grow bigger for several years to come.

Public Welfare

Dr. Otto L. Bettag reported as director of the Department of Public Welfare. He stated that some 150 bills have been passed in the last two years relative to the work of his department. There are 14 bills in the House and two in the Senate now dealing with public welfare work.

He will have a new school and hospital in Southern Illinois for retarded children over the age of 6 years. Capacity will be 750. Ground was broken in the West Side Medical Center, Chicago, recently for a hospital for retarded children under age 6. Illinois is the only State with two institutions of this type.

A \$150 million bond issue has been requested for the department.

The Mental Health Fund in Illinois, the money paid in by the families of patients in state hospitals, has been questioned, and some legislation introduced which might eventually threaten this fund. Illinois was the 47th state to establish such family responsibility, and at this time, only one out of every five families pays. The cost is \$1.30 a day. Dr. Bettag asked for Society action supporting the Mental Health Fund. He stressed the fact that state hospitals must not be used as a place for narcotic addicts unless that individual also is mentally ill. He felt that some use

should be made of the Chicago State Tuberculosis Hospital, only 50 per cent occupied.

A fund of \$200,000 is available for student nurses' scholarship (full financing) with the only stipulation that the nurse spend matching years in a state hospital following graduation. The salary scale has been increased and the minimum for nurses is now \$352 a month, and the maximum \$12,000 a year.

The annual mental health dinner will be held in Springfield on May 19, and all members of the Council will be welcome.

MOTION: (English-Endres) that the Council go on record as supporting the Mental Health Fund in Illinois. Motion carried.

Scientific Work

Dr. Burdick reported that the local committees for the annual meeting have been appointed and notification and instructions sent out. The new committee to entertain out of state guests is active and should function to make these gentlemen feel at home. There is a hospitality room for their use.

Dr. Lawrence Brislow, chairman of the Executive Committee of the Committee on Scientific Work, stressed the importance of the scientific program planning. He felt that the present system was haphazard, and that this group needs help from the Council. There should be a committee of the Council to act in an advisory capacity. The group of section officers is not experienced in program planning; meets in November for the first time to get work under way. Perhaps the programs for the sections should be planned by section officers, but the programs for the general assemblies should have continuity and experienced physicians should aid in the work. There are other important phases of the meeting that should receive consideration. This

year, in order to bring the physician back to the scientific programs after the viewing of exhibits, we have planned panels that we hope will be of sufficient interest to draw a good attendance.

Dr. Montgomery stated that this was discussed by the Executive Committee and that a rotating committee composed of men familiar with program planning would be considered.

Auxiliary

Mrs. Endres, as president of the Auxiliary, reported that the subscriptions to Today's Health had been sent to the members of the legislature (state and national); cards had been addressed; and the Auxiliary has received several acknowledgements from the members. The "March on Springfield" was the first venture of this kind; some 70 women attended. The recruitment program is going well in many of the county areas. The Auxiliary needs assistance at the local level, and asks co-operation from the county medical societies.

MOTION: (Piszczeck-Fullerton) that the request from WTTW for additional financial support be referred to the Finance Committee for future recommendation. Motion carried.

MOTION: (Fullerton-Reisch) that the \$336.00 be sent to Marjorie Shearon for "Shearon Legislative Service" as requested. Motion carried.

MOTION: (Fullerton-O'Neill) that the bills as audited by the Finance Committee be approved. Motion carried.

The Council adjourned at 12:30 o'clock.

Respectfully submitted,

Harold M. Camp, M.D., Secretary

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CORRESPONDENCE



Postoffice issues ruling on specimen shipments

The Chicago postmaster, Carl A. Schroeder, has issued the following announcement concerning the shipments of specimens:

"All cylindrical shaped parcels containing blood, urine, etc., mailed by physicians to clinics, hospitals, health departments, etc., are to have postage paid at the regular third class rates. That is, 3c for the first two ounces and 1½c for each additional ounce or fraction.

"However, effective May 1 a minimum rate of 6c is chargeable on all odd shaped parcels, which includes cylindrical shaped containers. This means that any tube weighing less than four ounces must have 6c postage affixed.

"Many hospitals, clinics, and health departments to which such materials are sent will not pay postage due on specimens sent to them for analysis.

"Containers with insufficient postage will not be returned unless the sender's complete address and the inscription 'return postage guaranteed' are shown in the upper left corner of the outside address label."

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July clinics for crippled children

Twenty-one clinics for Illinois' physically handicapped children have been scheduled for July by the University of Illinois, Division of Services for Crippled Children. The division

will count 17 general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical, social, and nursing service. There will be two special clinics for children with cardiac conditions and one each for children with rheumatic fever or cerebral palsy. Clinicians are selected from among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

- July 1 — Hinsdale, Hinsdale Sanitarium
- July 3 — Chicago Heights (Cardiac), St James Hospital
- July 8 — Joliet, Silver Cross Hospital
- July 9 — Cairo, Public Health Building
- July 9 — Flora, Clay County Hospital
- July 9 — Springfield, St. John's Hospital
- July 9 — Sterling, Community General Hospital
- July 14 — East St. Louis, St. Mary's Hospital
- July 14 — Peoria, Children's Hospital
- July 14 — Quincy, St. Mary's Hospital
- July 15 — Evergreen Park, Little Company of Mary Hospital
- July 16 — Elmhurst (Cardiac), Memorial Hospital of DuPage County
- July 16 — Rockford, St. Anthony's Hospital
- July 21 — Danville, Lake View Hospital
- July 23 — Decatur, Decatur-Macon County Hospital
- July 23 — Mt. Vernon, Masonic Temple

July 28 — Effingham (Rheumatic Fever), St. Anthony Hospital
 July 28 — Peoria, Children's Hospital
 July 28 — Alton, Alton Memorial Hospital
 July 29 — Aurora, Copley Memorial Hospital
 July 29 — Springfield (Cerebral Palsy), Memorial Hospital

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New rule on narcotic reports

Illinois pharmacists no longer are required to send copies of oral narcotic drug prescriptions to the Illinois Division of Narcotic Control as the result of the passage of House Bill 19.

This change in the law does not relieve pharmacists from sending in all other narcotic prescriptions on the official state blank, or on emergency blanks, by the 15th of the month following the month in which the prescriptions were filled.

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Hawaiian refresher course

The University of Southern California School of Medicine will present a postgraduate refresher course on board the S.S. Lurline and in Hawaii, July 24-August 15. Details may be had by writing to the director, postgraduate division, U.S.C. School of Medicine, 2025 Zonal Avenue, Los Angeles 33.

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Blood banks association will meet in Chicago

The American Association of Blood Banks will hold its 12th annual meeting at the Edgewater Beach Hotel, Chicago, November 4-7. The theme will be "The Complete Transfusion Service."

Those desiring to present papers should submit them prior to June 30 to (1) scientific section, Dr. Alan R. Jones, 332 Longwood Avenue, Boston 15; (2) technical section, Miss Shirley Busch, Charles Hymen Blood Center, 2742 West 15th street, Chicago 8; (3) administrative section, Clifford I. Argall, PH.D., Baptist Memorial Hospital Blood Bank, Memphis 3.

Further information may be had from the association, 30 North Michigan Avenue, Chicago 2.

Ileoptomists club formed

A new organization, Ileoptomists of Chicago, has been organized under the guidance of Dr. Joseph B. Kirsner of the University of Chicago College of Medicine for the purpose of helping individuals in the proper care of and adjustment to ileostomies.

Meetings are held at 6:30 o'clock on the last Monday of each month at the Fabric Salesman's Club, 222 West Adams Street. Patients with ileostomies wanting to join the organization should write to Mrs. Lee Vance, secretary, 330 Ridge Road, Barrington, Illinois. Physicians interested in attending meetings or acquiring information may call Dr. Kirsner, MUsem 4-6100, extension 5563.

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O. & G. board applications

Applications for certification by the American Board of Obstetrics and Gynecology, new and reopened, part 1, and requests for re-examination, part 2, are being accepted. The deadline is August 1. For information, write to Dr. Robert L. Faulkner, secretary, 2105 Adelbert Road, Cleveland 6.

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"Medicine—Lifelong Study" theme of Chicago conference

Medical educators from 50 countries will meet in Chicago, August 29-September 4, for the Second World Conference on Medical Education, to be held under the auspices of the World Medical Association.

"The meeting will provide common ground for the free exchange of scientific information and experience," according to Dr. Louis H. Bauer, New York, secretary-general of the WMA. "It will give medical educators an opportunity to examine the progress that has been made during the five-year interval in conferences."

President Eisenhower is patron of the conference and has been invited to address the opening plenary session on August 31. There will be about 125 speakers from 50 countries on the program.

Collaborating with the WMA in sponsoring the conference are the World Health Organization, the Council for International Organizations of Medical Sciences, and the International Association of Universities.

THE P. R. PAGE

John A. Mirt



Winnebago reviews PR position

The April issue of the *Bulletin* of the Winnebago County Medical Society reports that the article appearing in the April issue of *Good Housekeeping* magazine concerning the pediatric section at Rockford Memorial Hospital has caused the society "to pause and review its position in regard to the use of physicians' names."

The county society has given its Public Relations Committee the responsibility of developing a code to be used in determining when a physician's name should be used in public print.

"Nearly four years ago the society adopted a set of rules to govern appearances on television," the *Bulletin* says. "Generally, these rules have been followed, but they are not applicable to newspaper and magazine publications.

"The task assigned to the PR Committee is not an easy one. To give a blanket denial to the use of names would understandingly stir the ire of the publications and the profession. On the other hand, to open the doors wide would invite the charge of advertising and commercialism within the profession. A happy middle ground must therefore be formulated.

"There is no question but that times change and certain concepts change with them. Whether we realize it or not, medicine is big news today. Surveys show that medical and scientific news are read more religiously than almost any other type of news. That the publications will print medical stories in one way or another is also without question, for both newspapers and maga-

zines exist at the whim of the buying and reading public.

"The matter to be resolved is whether or not the use of physicians' names is vital to the success of the story. If it is vital, then the physicians must choose what type of stories are important. More than this, they must be assured that the stories using their names are medically accurate."

The Public Relations Committee proposed to make a survey of its members who will be asked to express their views.

As Winnebago is the largest of the downstate county medical societies, with a membership of more than 200, its action will be awaited with a great deal of interest.

Praise for St. Clair County

The St. Clair County Medical Society, in a letter to the *East St. Louis Journal*, praised the efforts of various community organizations in stimulating the use of Salk vaccine shots for polio prevention, a campaign that brought a most encouraging response.

The *Journal*, in an editorial entitled "Don't Forget the M.D.," called attention to this letter and added:

"What the medical society, with proper humility, does not say is that the society ought to be listed right along with others in this commendation.

"More and more, the medical profession of this community has been progressing toward a policy of sound public relations, away from the

traditional isolation which has marked the profession throughout the centuries. This is beneficial to everyone.

"This community and its doctors are learning to know each other. This is the big story, even transcending the truly remarkable record established in the war on polio. This polio situation is typical of the society's co-operation in other vital public welfare and health campaigns, such as the cancer crusade, heart month, mental health, cerebral palsy, and the United Fund."

How to deal with the press

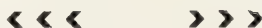
A newspaperman, like anyone else, prefers to work with people who know his problems and needs. If you are in charge of feeding medical society news to the papers this year and you are not familiar with newspaper requirements you will find the answers in "How to Make Friends with the Press," a handbook published by the

Blue Cross Commission.

This short course in the care and preservation of a newspaper's good will describes what events are likely to interest a paper and how to go about getting them published. Questions on whom to approach on a particular story, when to send a release by mail and when to take it in person, and what information a release should contain are all answered in well-illustrated terms.

The book is authoritative too. Twelve newspaper editors around the country reviewed it before publication and contributed their suggestions and ideas. It is written for Blue Cross plans but medical societies will find it equally applicable.

A limited number of copies are available at no cost from the Blue Cross Commission of the American Hospital Association, 840 North Lake Shore Drive, Chicago 11.



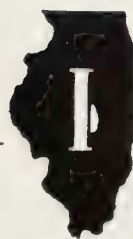
Enzymes and dystrophy

Our findings of normal serum enzyme activities in parents of patients with muscular dystrophy suggest that there is no genetically transmitted defect of serum enzyme activity. This certainly must mean that the abnormality of serum enzyme activities seen in dystrophic patients is strictly secondary to the primary mechanism of the disease. In numerous other hereditary diseases where enzyme defects have been demonstrated in patients, similar abnormalities frequently have been seen in parents and siblings of affected patients. *Laurens P. White, M.D. Serum Enzymes. California M. Jan. 1959.*

Edema of pregnancy

Toxemia of pregnancy frequently is associated with fluid retention. Often, clinically detectable edema and weight gain are the initial stigmata of the process. Early reversal of this excess fluid retention was postulated to be a preventive and therapeutic measure. A trial of chlorothiazide was a natural outgrowth of this concept. Chlorothiazide is at present the most effective oral diuretic in pregnancy. As dramatic as its diuretic result has been, the drug in no way altered the fetal loss or incidence of small babies associated with toxemic pregnancies. *Robert Landesman, M.D. et al. Chlorothiazide in Edema of Pregnancy. New York J. Med. Jan. 1, 1959.*

AT THE EDITOR'S DESK



PIPED IN REFRIGERATION

Future cardiac surgeons may have need for furlined gloves. The VA announced a new method of hyperthermia in which oxygenated and refrigerated blood is circulated through the main arteries of the body by use of a heart-lung machine. In this method the internal organs are cooled first, in contrast to the methods in which the cooling process begins on the surface and works down. The new methods have many technical advantages and may be safer. It is not necessary to cool the entire body and the surgeon is able to spend several more minutes correcting defects in the heart.

STRESS

The response of the eosinophilic leucocyte in the circulating blood is being used as a yardstick of the body's reaction to stress. This was demonstrated on 24 adults undergoing extensive dental procedures. The level increased whenever the pain and discomfort increased. Stress free appointments were used as control periods and significant differences were noted in the eosinophil count.

ODORLESS DEODORANT

The first odorless deodorant was introduced recently by National Cylinder Gas. The product is unique in that it absorbs odors rather than simply masking them or paralyzing the sense of smell. It can be sprayed directly on bandages,

and even kills the smell of gangrene. It can be circulated in halls and rooms, and when mixed with soap and water will clean out odor catching corners. Other uses include washing and disinfecting dishes, utensils, and garments.

BLUE CROSS RESERVES

According to the American Hospital Association, Blue Cross Plans had to tap their reserves for the second time in two years. Members were hospitalized over 2 million days more in 1958 than in the previous year. Nationally they took nearly five times more from reserves than in 1957. There were many reasons why the program continues to cost more. "New benefits are constantly made available in Blue Cross contracts and there is less apprehension about going to hospitals as the public becomes more conscious of health needs and care." In addition, the group of men and women over 65 is increasing. There is an end to reserves and we can assume that the rates will be boosted unless the program is changed.

CULTURE AND SENSITIVITY TESTS

Medikit is a simple bacterial sensitivity technique adapted for office use. It consists of disposable plastic Petri dishes containing Mueller Hinton blood agar, sensitivity rings containing eight antibacterial agents, sterile applicators, and sensitivity record forms. The usual ring is placed

in the dish with sterile forceps. The regular culture technique is followed and the plate is incubated at room temperature for 24 hours. The result offers a rough estimate of the most effective antibacterial against the bacterial infection present.

CONTACT LENSES

The contact lens industry is pushing vigorously for recognition. This year they expect 2,000 "eye specialists" to attend their first World Contact Lens Congress in Chicago on August 2-4. The Food and Drug Administration warned against the use of a cleanser for contact lenses that is contaminated with *Pseudomonas aeruginosa*. These organisms were found in one lot that bears the code number 010159. The FDA said there would be no harmful effects on normal healthy eyes, but that dangerous infection may occur if injury or infection is present. The product is called Barnes-Hind Wetting Solution. The company and the government are making every effort to recall outstanding stocks.

PHARMACEUTICALS

Ergomar, Nordson's new sublingual ergotamine tartrate remedy for migraine, is reported highly effective in various tests. In a co-operative series, 25 investigators observed 251 patients receiving this form of ergotamine tartrate; 80 per cent obtained complete relief; 15 per cent, partial relief; and the remaining five per cent, no relief.

Parke, Davis & Company introduced recently a new injectable form of chloramphenicol—the sodium salt of the monosuccinate ester. It can be administered intramuscularly, intravenously, or subcutaneously and is indicated if rapid absorption of an antibiotic is needed.

The first orally active substance to protect the body against poisoning by mercury compounds was announced at the recent convention of the American Chemical Society. It is N-acetyl-DL penicillamine. The British drug, Anti-Lewiside, has been used for years but it cannot be taken orally.

Many other new basic chemical products were reported at the meeting including nialamide for mental depression, a protein free liquid that inhibits the contraction of myofibrils to the extent of complete relaxation, and wetting agents that help keep dentures in place. Additional syn-

thetic analgesics of the caliber of morphine were described along with a chemical compound of double barreled action that alleviates pain and relaxes muscle. The latter 2- (beta-hydroxyphenethylamino) -pyridine hydrochloride has the analgesic strength of codeine and a muscle relaxant power that is superior to mephenesin.

Most of these are products of basic science. Many years may pass before they graduate into clinical usage.

GENERAL

Dr. Louis Lasagna, Johns Hopkins, spoke of the ethical, legal, and financial responsibilities of evaluating new drugs before the Pharmaceutical Manufacturers Association convention at Boca Raton, Florida. According to Drug Research Reports he was sharply critical of many of the industry's practices. We are familiar with some of these promotional methods and agree that modifications are in order. Some of the points covered include the pharmaceutical numbers racket used to claim new compounds are more potent than older drugs; circulating reprints by the thousands; unwise detailing during which company representatives criticize their competitors to the physicians; the use of medical students during the summer as detail men; new product avalanches which pose a national threat to the doctor's ability to assimilate new information; pressures from industry on researchers for speedy answers and favorable results; and industry cocktail parties, steak dinners, and awards to medical students.

The American Psychiatric Association is the oldest national medical association in North America. It was founded on October 16, 1844, as the Association of Medical Superintendents of American Institutions for the Insane with an original membership of 13 physicians. Its name was changed in 1921 and it now has about 11,000 members.

Many public relation departments will grasp at any straw to find new ways to advertise a product. Johnson & Johnson used the opening of the St. Lawrence Seaway to focus attention on their baby powder. The M.S. Anglian from Genoa carried 1,850 110-pound bags of high quality Italian tale, which is enough for the Chicago plant of Johnson & Johnson to produce some 412,000 8-ounce cans of baby powder.

NEWS of the STATE



ADAMS

MEETING. Sidney J. Harris, Chicago Daily News columnist, spoke on "How To Enjoy Your Child," at the May meeting of the Adams County Medical Society.

COOK

NEW POSTS. Dr. Edward C. Holmblad, retiring as managing director of the Industrial Medical Association, was honored at the annual banquet of this organization. He has assumed his new duties as director of the newly created Division of Medical Services, Illinois Public Aid Commission. This Division will also assume the function of the Medical Assistants' section of the Division of Program Planning.

Dr. William E. Adams was elected president of the American Association for Thoracic Surgery at its annual meeting. Dr. Adams is Raymond professor of surgery at the University of Chicago and a senior consultant surgeon at both Great Lakes Naval Hospital and the Cook County Suburban Tuberculosis Sanitarium.

Dr. J. Garrott Allen of the University of Chicago will take over July 1 as head of the Stanford University Medical School's department of surgery.

Dr. Adolph Rostenberg, Jr. has been named head of the department of dermatology, University of Illinois College of Medicine.

Dr. Edward Press, formerly association director of the division of services for crippled chil-

dren at the University of Illinois, and assistant professor of preventive medicine in the University of Illinois College of Medicine, has been selected as Evanston health director, replacing Dr. Winston H. Tucker, deceased.

Dr. E. Lee Strohl, senior attending surgeon at St. Luke's Hospital, was appointed a director of Municipal Tuberculosis Sanitorium by Chicago's Mayor Daley, who indicated that Dr. Strohl will be named the institution's president.

CHICAGO SOCIETIES. Papers given at the May meeting of the Chicago Gynecological Society were: "Combined Paracervical and Pudendal Nerve Blocks: A Simple Form of Transvaginal and Regional Anesthesia," by Drs. Alfred J. Kobak and Max S. Sadove, with discussion opened by E. Trier Morch, head of department of anesthesia, Cook County Graduate School and University of Illinois College of Medicine; and "Ovulation Time: A Modified Rat Hyperemia Test Compared with Other Criteria," by Drs. Milton H. Dresner and Melvin R. Cohen, with discussion opened by S. J. Behrman, associate professor of obstetrics and gynecology, University of Michigan.

The Chicago Laryngological and Otological Society elected the following officers at their May meeting: Drs. George H. Woodruff, president; Linden J. Wallner, vice-president; and Robert Lewy, secretary-treasurer.

The Chicago Urological Society officers for 1959-60 are: Drs. Cornelius W. Vermeulen, pres-

ident; J. Kenneth Sokol, vice-president; and David Presman, secretary-treasurer.

At the May meeting, the Chicago Surgical Society presented the 1959 Chicago Surgical Prize for Surgical Research of \$500 (donated this year by Dr. Edwin M. Miller) to Dr. Donald Dawson for his paper on "Plasma Sterilization." Dr. Dawson is working at the University of Chicago.

At the annual meeting of the Chicago Society of Physical Medicine and Rehabilitation the following were elected to assume office on January 1, 1960: Robert W. Boyle, Wauwatosa, Wisconsin—president; Louis Schwartz, Chicago—vice president; Bernard J. Michela, Chicago—secretary-treasurer; and Wladimir T. Liberson, Hines—board of trustees.

At the annual meeting of the Chicago Dermatological Society the following officers were elected: Leon M. Goldman, Cincinnati—president; Harold M. Shellow—vice president; Frederick J. Szmanski—secretary-treasurer.

HONORED. Dr. T. R. Van Dellen was among persons honored at the 11th annual meeting of the National Epilepsy league in Washington, D. C.

DEKALB

MEETING. Dr. Benjamin W. Lichtenstein, clinical professor of neurology, University of Illinois College of Medicine, spoke on "The Diagnosis and Management of Strokes," at the May meeting of the DeKalb County Medical Society.

LAKE

MEETING. The May meeting of the Lake County Medical Society was held jointly with the Lake County Press Association. Members of both groups discussed various aspects of press relations.

LASALLE

MEETING. Dr. and Mrs. Guibor presented a travelog about Africa at the May meeting of LaSalle County Medical Society. It was annual ladies night.

MCDONOUGH

MEETING. A discussion led by Dr. K. T. Pawlias on "Medical Economics" was the feature of the April meeting of the McDonough County Medical Society.

PEORIA

MEETING. Dr. Val Wellman, assistant professor of surgery, St. Louis University School of Medicine, was the speaker at the May meeting of the Peoria Medical Society.

RANDOLPH

MEETING. Dr. W. F. Weir Sparta, was honored at the June dinner meeting of the Randolph County Medical Society. He was presented with the Fifty Year Club certificate and pin.

SANGAMON

MEETING. Dr. Roy E. Boggs, chief anesthesiologist, City Hospital No. 1, St. Louis, spoke on "Techniques of Resuscitation," at the May meeting of the Sangamon County Medical Society. Dr. Emil Bernard was presented with his Fifty Year Club certificate.

ST. CLAIR

MEETING. The May executive meeting of the St. Clair County Medical Society was held at Pleasant View Sanatorium.

VERMILION

MEETING. Dr. Walter C. Alvarez spoke on "Psychosomatic Medicine," at the May meeting of the Vermilion County Medical Society.

WHITESIDE AND LEE

MEETING. Dr. William J. Grove, associate professor of surgery, University of Illinois College of Medicine, spoke on "Emergency Surgery in Pediatrics," at the May meeting of Whiteside and Lee County Medical Societies.

GENERAL

NURSES' TRAINING. Seven nursing students (one a man) from Southern Illinois University have enrolled in the University of Illinois College of Nursing under a unique arrangement between the two institutions. They are in the midst of the first of five quarters of studies they are taking at the University of Illinois' Chicago Professional Colleges to gain clinical experience not available at Southern. The University of Illinois maintains a 620 bed general hospital where nursing students receive nursing practice. The SIU students have completed one and a half years of basic nursing courses at SIU and are expected to return there for their senior year in residence before obtaining a degree. One of the aims of the

program is to provide nurses for the southern part of the state who come from that area.

AWARDS. Dr. Goodwin M. Breinin, chairman of the department of ophthalmology and the Daniel B. Kirby professor of research ophthalmology, New York University-Bellevue Medical Center, was given the 1959 Edward Lorenzo Holmes Memorial Award of The Institute of Medicine of Chicago. This award was established by the late Dr. Rudolph Wieser Holmes as a memorial to his father, a pioneer Chicago ophthalmologist, and is given in recognition of distinguished contributions in medical science, preferably in ophthalmology. Dr. Breinin's has made important contributions in the field of neuromuscular control of the ocular muscles and the development of ocular electromyography in advancing knowledge of strabismus.

Dr. Henry Seymour Kaplan received the 2nd annual award "for meritorious investigation by a scientist under the age of 45, in the field of cancer," from the Ann Langer Cancer Research Foundation of Chicago. Dr. Kaplan, professor of radiology, Stanford University Medical School, has made significant contributions in basic and clinical cancer research.

Dr. Albert B. Sabin, of the University of Cincinnati College of Medicine, has won the University of Chicago's Howard Taylor Ricketts Memorial Award for developing an oral polio vaccine that currently is being tested extensively to determine whether it is feasible for mass use.

NEW MENTAL HEALTH HOSPITAL. Mrs. Bernice T. Van der Vries, chairman of the fund drive for the Mental Health Society of greater Chicago; Dr. Francis V. Gerty, president of the American Psychiatric Association; Robert Farwell, president of the Mental Health Society of greater Chicago; Rev. R. Kenneth Wobbe, Christ Evangelical and Reformed Church of Des Plaines; and members of the Forest Hospital staff and their families attended the cornerstone laying ceremonies for the new addition "Country House." Dedicated to research, care, and treatment of emotional and personality disorders, the Forest Hospital is currently in its 20th year of service to the Chicagoland community, and this addition of 30 beds incorporates the latest techniques for efficient patient handling, comfort, and safety.

MEETING. The following members of the Illinois Psychiatric Society were elected to office

for the year 1959-60: Drs. Frances Hannett, president; Joel S. Handler, president-elect; and Paul Nielson, secretary-treasurer.

"YOUR HEALTH COMES FIRST" OVER RADIO CHICAGO WJJD:

JULY 22 AT 9:45 P.M.: EDWARD A. PISZCZEK, Field Director, Suburban Cook County Tuberculosis Sanitarium District, "Tuberculosis—1959."

This is a public service program sponsored by the Illinois State Medical Society in co-operation with Radio Chicago WJJD.

PROGRAMS ARRANGED BY THE ILLINOIS STATE MEDICAL SOCIETY in Co-operation with the CHICAGO BOARD OF EDUCATION FOR YOUTH WEEK:

IRVING H. ROSENTHAL, clinical associate in pediatrics, Chicago Medical School, the Davis Branch of the Kelly High School, May 12, on "Teen Age Tips on Health."

LAWRENCE D. ELEGANT, staff member of the Sarah Morris Hospital for Children, the Gunsaulus Branch of the Kelly High School, May 13, on "Hints to Healthy Living."

PAUL K. ANTHONY, clinical associate in pediatrics, Stritch School of Medicine of Loyola University, the Altgeld Elementary School, May 13, on "Teen Age Tips on Health."

LECTURES ARRANGED BY THE ILLINOIS STATE MEDICAL SOCIETY:

EUGENE F. LUTTERBECK, professor of radiology, Cook County Graduate School of Medicine, addressed the Kankakee County Medical Society in Kankakee, April 21, on "Clinical Use of Radioisotopes."

MORTEN B. ANDELMAN, member of pediatric staff of the Sarah Morris Hospital for Children, addressed the Schurz High School freshmen class, June 4, on "Teen Age Tips on Health."

DEATHS

EDMUND A. BEHRENDT*, Bloomington, who graduated at Northwestern University Medical School in 1909, died March 8, aged 77.

COSIMO CASTRO*, Park Ridge, who graduated at Loyola University School of Medicine in 1930, died May 5, aged 60. He was affiliated with the veterans administration regional office in Chicago.

CLARA MARIE DAVIS*, retired, Winnetka, who graduated at the University of Michigan Medical School, Ann Arbor, in 1904, died April 8,

*Indicates member of the Illinois State Medical Society.

aged 80. She was a former staff member of the Children's Memorial Hospital.

WOLF Z. FELSHER*, retired, Chicago, who graduated at Loyola University School of Medicine in 1917, died May 9, aged 70. He was associated with the Mandel clinic at Michael Reese Hospital for 28 years.

GROVER C. FERRELL, Eldorado, who graduated at the Chicago College of Medicine and Surgery in 1912, died February 4, aged 72. He was past-president of the Saline County Medical Society; surgeon for the New York Central, Illinois Central and Louisville, and Nashville Railroad companies, and he was associated with the Ferrell Hospital.

NELSON F. FISHER*, Chicago, who graduated at Rush Medical College in 1901, died April 25, aged 63. He was a member of the staff of St. Luke's Hospital. Since 1945, his interests in big game hunting had taken him on trips to Alaska, Africa, and India.

JAMES S. GEEN*, Utica, who graduated at Baltimore Medical College in 1896, died in March, aged 89.

JOSEPH P. HEINEN, Chicago, who graduated at Rush Medical College in 1895, died May 10, aged 86. He had been affiliated with the Chicago Board of Health for many years.

JOSEPH A. HUBBELL*, Chicago, who graduated at Loyola University School of Medicine in 1917, died April 29, aged 76. He had practiced medicine in Chicago's Hyde Park area for 37 years.

TIMOTHY S. HUGGARD*, Oglesby, who graduated at the Chicago College of Medicine and Surgery in 1909, died in March, aged 79.

JACOB W. KLAPMAN*, Chicago, who graduated at Northwestern University Medical School in 1925, died May 4, aged 60. He was superintendent of the Mental Health Centers in Chicago under the Department of Public Welfare of the State of Illinois.

OSCAR C. KLUG*, East St. Louis, who graduated at the Chicago College of Medicine and Surgery in 1913, died February 6, aged 77. He was a member of the staffs of St. Mary's and Christian Welfare Hospitals.

WILBERT F. McNARY*, East St. Louis, who

graduated at Barnes Medical College, St. Louis, in 1909, died in February, aged 79.

CHARLES A. MILLER*, Macon, who graduated at the University of Illinois College of Medicine in 1902, died March 21, aged 84.

PAUL B. RABENNECK*, Nashville, who graduated at St. Louis University School of Medicine in 1912, died April 9, aged 73. He was president of the Washington County Medical Society at the time of his death, and a past president of the Southern Illinois Medical Association.

JENNIE MAUDE THOMAS ROGERS*, Canton, who graduated at the College of Physicians and Surgeons, Keokuk, in 1898, died February 18, aged 83.

EDMOND P. STAFF*, Ramsey, who graduated at Missouri Medical College, St. Louis, in 1895, died April 18, aged 89. He served as physician at the Illinois State Penal Farm for many years. He was a member of the "Fifty Year Club" of the Illinois State Medical Society.

RALPH C. SULLIVAN*, Oak Park, who graduated at Rush Medical College in 1912, died April 29, aged 72. He was a member of the staff of the Oak Park Hospital.

ALEXIS T. TELFORD*, retired, Olney, who graduated at Missouri Medical College, St. Louis, in 1896, died April 6, aged 86. Before taking up his practice at Olney in 1898, he was a member of the staff of the State Asylum Hospital at Chester. Two years ago he was severely injured in an automobile accident which forced his retirement from active practice.

ERNEST TELLER*, Chicago, who graduated at the Medizinische Fakultät der Universität, Wein, Austria, in 1926, died April 11, aged 58. He was chairman of the chest department of Mt. Sinai Hospital.

KENNETH H. VINNEDGE, Quincy, who graduated at the University of Illinois College of Medicine in 1930, died recently, aged 58. His practice had been limited to the field of roentgenology.

GLEN WALKER*, Farina, who graduated at Loyola University School of Medicine in 1928, died March 20, aged 61.

*Indicates member of the Illinois State Medical Society.



The Illinois Medical Journal

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The Illinois State Medical Society



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July-December, 1959

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Serum Glutamic Oxalacetic Transaminase Activity in Various Diseases

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Since the method for the determination of the serum glutamic oxalacetic transaminase level was devised by Karmen and co-workers,^{11,14} investigators have tried to determine the clinical application of the information imparted by this test. This paper reviews the experiences of many investigators and reports our experience with it at Illinois Masonic Hospital in patients in various disease states.

Glutamic oxalacetic transaminase is widely distributed in animal tissues, but its greatest concentration in decreasing order, is in heart muscle, skeletal muscle, brain, liver, and kidney. Normal serum transaminase levels as reported by various investigators are as follows:

Wroblewski et al.	5-40 units/ml.
Kattus et al.	16-24 units/ml.
Steinberg et al.	10-33 units/ml.
Chinsky et al.	7-40 units/ml.
Nydicke et al.	10-40 units/ml.

To summarize the different reports, 40 units/ml. can be considered the upper limit of normal; 41 to 50 units, borderline; and above 50 units, abnormal.

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Myocardial Infarction

The serum glutamic oxalacetic transaminase level becomes significantly elevated approximately six hours (range, from six to 36 hours) after myocardial infarction. The level returns toward normal on the third to sixth day.⁴ Serum transaminase levels in experimental myocardial infarction have been reported.^{1,2,15,16,19,23,26} A relatively linear correlation exists between peak transaminase levels and the amount of myocardial infarction as estimated at autopsy. Infarction of myocardium, as little as 10 per cent and possibly less of total myocardium, is associated with significant rises in the transaminase level. Chinsky and others reported that 92 per cent of 117 patients with this condition had high transaminase levels.³ In all of Agress and co-workers' cases the serum levels rose sharply after myocardial infarction.¹ More recently, Chinsky et al. reported 222 cases, with abnormally high levels in 97 per cent.⁴ In the group in which transaminase levels were above 200 units, mortality was 52 per cent; in those with levels below 200 units, it was 13 per cent.

In our hospital, serum transaminase levels determined at various time intervals after myocardial infarction were compared with the electrocardiograms; 69 determinations were done on a

TABLE 1

Case	Transaminase, units/ml.	Interval after onset	Electrocardiographic findings
1.	100	5 days	on onset-left ventricular strain 4 days-myocardial infarction
2.	75 10	7 hours	7 hours-myocardial infarction
3.	80 50 4	36 hours 5 days 10 days	36 hours-myocardial infarction
4.	45 236	3 weeks 4 weeks	3 weeks-myocardial ischemia 4 weeks-myocardial infarction
5.	140	36 hours	acute myocardial infarction
6.	84 56 40 4	2 days 14 days 16 days 21 days	acute myocardial infarction
7.	18 110 60	24 hours 3 days 3 weeks	acute myocardial infarction
8.	194	36 hours	myocardial infarction
9.	78 10 10	24 hours 2 days 3 days	several hours-acute myocardial infarction
10.	100 70 5	12 hours 36 hours 2 weeks	acute myocardial infarction
11.	5 45	30 hours 2 days	myocardial infarction

total of 35 patients. Eighteen had elevated levels, with values ranging from 51 to 236 units, and five of the group showed borderline levels. Of the 12 who had normal levels, five had the first test three to six days after onset of symptoms; three, more than two weeks after onset; only four had normal transaminase levels within 24 hours after onset of infarction.

Table 1 is a comparison of transaminase levels determined at different intervals following onset of the infarction with electrocardiographic tracings in 11 patients.

A casual examination of the data in these cases indicates that in the presence of high transaminase levels, the electrocardiogram shows acute myocardial infarction. White reported that some patients with unquestioned infarcts of limited extent do not have abnormally high serum transaminase levels. He also stated that in his experience, no false negative results were found

when lactic dehydrogenase determination was used.²⁷ This cannot be said for glutamic oxalacetic transaminase values. The usefulness of lactic dehydrogenase determinations in diagnosing myocardial infarctions should be investigated further.

Angina Pectoris: Coronary Insufficiency

The presence of a normal serum transaminase level in angina pectoris has been reported by a number of investigators.^{2,3,4,12,15,19,23} Experimental myocardial ischemia of 45 minutes' duration does not influence transaminase levels.²³ Even when ischemic changes are shown on the electrocardiogram, transaminase levels are not elevated. But if ischemia is sufficiently prolonged, tissue necrosis results and transaminase levels will be increased above normal.¹⁰ In our hospital, we made 59 serum transaminase determina-

TABLE 2

Case	Hospital Day	Transaminase units/ml.	Cardiac Arrhythmia
1.	1st	90	Auricular flutter with 2:1 block ventricular rate 130/min.
	3rd	50	Auricular flutter with 4:1 block, ventricular rate 62/min.
	6th	30	
2.	1st	25	2nd day EKG, auricular flutter-fibrillation ventricular rate 100/min.
3.	3rd	30	2nd day EKG, auricular fibrillation, ventricular rate 145/min.
	4th	20	
4.	2nd	70	Paroxysmal tachycardia (type unknown) ventricular rate 140/min.

tions on 33 patients with coronary insufficiency but no evidence of myocardial infarction. Four had abnormal transaminase levels (70, 56, 62, 140 units), seven had borderline values, and 22 had normal levels.

Cardiac Arrhythmia

Chinsky and associates reported normal transaminase levels in patients with a ventricular rate of 120 to 160 per minute, and elevated levels in patients with ventricular rates greater than 180 per minute.^{3,4}

Table 2 summarizes data in the four cases of cardiac arrhythmia studied in this hospital.

Examination of the data shows a variance from Chinsky and co-workers' findings.^{3,4} In three of the seven determinations done on patients with ventricular rates of 140 or less, transaminase levels were elevated.

Rheumatic Fever: Rheumatic Carditis

Sixty-four patients in various stages of rheumatic fever were investigated by Nydick and others.²⁴ Serum transaminase levels were elevated in patients with clinical or histologic evidence of active rheumatic carditis and normal values were found in rheumatic patients without clinical evidence of active cardiac involvement. Serum transaminase levels returned to normal in all patients after the acute rheumatic process subsided. The effect of aspirin or cortisone upon concentrations of transaminase in serum could not be evaluated clearly in the absence of control groups. More recently, Mason and Wroblewski reported a rise in the transaminase level in rheumatic fever, with some exceptions.¹⁹ The rise appears to be correlated with salicylate in-

duced toxic hepatitis rather than with the degree of cardiac tissue injury. We had only one patient with rheumatic fever. A level of 50 units was recorded at one time, and a level of 20 units seven days later.

Myocarditis

Serum transaminase levels in patients with myocarditis have been reported as within normal limits.^{4,19} We had only one patient with acute myocarditis whose transaminase level was checked. The findings are as follows:

2nd hospital day	46 units/ml.
4th hospital day	34 units/ml.
6th hospital day	30 units/ml.
12th hospital day	36 units/ml.

Pericarditis: Subacute Bacterial Endocarditis

Serum transaminase levels in patients with pericarditis have been reported to be within normal limits.^{2,3,4,19} No elevation of levels has been reported in subacute bacterial endocarditis.⁴ None of these conditions was studied at our hospital.

Congestive Heart Failure

Normal levels of serum transaminase activity have been reported in congestive heart failure.^{2,3,4,12} More recently, however, Lieberman and others have discussed 14 patients in moderate to severe failure of the right side of the heart with no evidence of acute myocardial infarction.¹⁸ Three had elevated serum transaminase levels. In a few of the patients with initial levels in the so-called normal range, however, there was a gradual lowering of transaminase activity with

the attainment of compensation. Two patients with elevated initial levels showed a return to normal activity with the appearance of cardiac compensation. It appears that failure of the right side of the heart does not ordinarily affect transaminase activity significantly. According to these authors, it is possible that sudden passive congestion of a liver already damaged by chronic heart failure may promote such further damage as to elevate the transaminase level. At this hospital, one patient in severe congestive failure had a transaminase level of 70 units at first, and two days later showed a level of 37 units. There was no evidence on the electrocardiogram of recent myocardial infarction.

Acute Pulmonary Edema

Ten serum transaminase determinations were done on five patients with acute pulmonary edema. The results are summarized in table 3. All patients had normal serum transaminase levels, with one unexplained exception.

TABLE 3

Case	Transaminase units/ml.
1.	39
	14
	30
2.	5
	60
3.	38
	15
4.	16
5.	20
	22

Chinsky and associates reported on 27 patients with acute pulmonary edema; 19 had normal serum transaminase levels, seven borderline levels, and 1 had a high level.^{3,4} The condition of the last mentioned was complicated by auricular fibrillation with a ventricular rate of 180 per minute.

Pulmonary Infarction

Only one patient with a possible pulmonary infarction was studied at the hospital. The transaminase level was in the normal range. Goldstein and co-workers described the use of serum transaminase levels in the differentiation of pulmo-

nary embolism from myocardial infarction in 12 cases. Uncomplicated pulmonary embolism was not associated with increased serum transaminase levels.⁷

Hepatitis

Greatly increased serum transaminase levels early in the course of hepatitis have been reported.^{3,4,12,19,21,22,28,30} In general, by the time the bilirubin level is normal the serum transaminase activity also has returned to normal.²² Molander and others reported that in experimentally induced hepatitis, due to carbon tetrachloride poisoning, the height and duration of increased serum transaminase activity was proportional to the amount of carbon tetrachloride administered as well as to the severity of liver cell damage.²¹ Wroblewski and LaDue reported striking serum transaminase levels 48 hours after exposure but they fell to normal within one week.²⁸

In homologous serum hepatitis and infectious hepatitis, the usual liver function tests remained abnormal for from 10 days to three months longer than it took for the serum transaminase to return to normal limits. Chinsky et al. presented 21 cases of hepatitis.⁴ It was found that the serum transaminase levels were high in the first week of infectious and serum hepatitis (508-2,240 units), rapidly fell over the next seven to 10 days, and then remained abnormally elevated (50-150 units) for another one to four weeks.

Serum transaminase levels were elevated in patients with acute toxic hepatitis due to carbon tetrachloride. In toxic hepatitis due to Thorazine®, salicylate, cincophen, azaserine, Pyrazinamide®, and other agents, elevations were smaller than in carbon tetrachloride poisoning. However, in one clinicopathological report a patient with Thorazine hepatitis was reported to have had a normal serum transaminase level.³¹

The serum transaminase levels on six hepatitis patients were determined at our hospital. Liver function tests and transaminase levels for these cases are summarized in Table 4. None was markedly elevated. The time after the onset of symptoms at which these tests were done may be a factor. Also, it is possible that serum glutamic pyruvic transaminase levels would have been more significant than the glutamic oxalacetic transaminase levels that were determined.

TABLE 4

Case diagnosis, time after onset	1 infectious hepatitis 4 months	2 serum hepatitis 12 days	3 viral hepatitis 2mo. 2½mo.	4 viral hepatitis 11 days	5 infectious mononucleosis 10 days	6 chronic hepatitis due to CC14 6 months
transaminase units/ml.	30	8	29 70	80	93	50
total protein gm./100 ml.	6.90	6.50	7.10	5.84	7.90	6.2
albumin	4.93	2.66	4.51	2.97	4.21	4.9
globulin	1.97	3.84	2.59	2.87	3.69	1.3
alkaline phosphatase	1.8	5.7		4.7	3.4	
thymol turbidity	10.2	26.0	10.8 11.8	15.3	13.9	8.3
cephalin flocculation	2+	3+	1+ 3+	4+	3+	trace
bilirubin total	0.8	3.6	1.0	4.0		0.2
direct	0.4	2.7	0.4	2.7		0
indirect	0.4	0.9	0.6	1.3		0.2
cholesterol		146	262	108	134	
cholesterol esters %		33	60	65	67	
bromsulphalein %	5.5		9.5			

Cirrhosis of Liver

Elevation of serum transaminase levels in patients with cirrhosis of the liver has been reported, with some variation.^{3,4,19,22,29} In general, the sicker patients—with increased clinical and laboratory evidence of activity of their disease—had higher levels although there was no consistent correlation between the results of this test and of any other single liver function test.²² Cirrhosis of the liver cannot be differentiated from the disorder caused by metastatic carcinoma to the liver through the use of the serum transaminase level. No cases of cirrhosis were observed here.

Obstructive Jaundice

Minimal to moderate elevation of the serum transaminase level has been noted in patients with obstructive jaundice.^{3,4,19,22,28,29} The level was elevated preoperatively, but fell to normal in two to 14 days postoperatively.²⁸ The transaminase level did not increase to the same extent as the bilirubin level.¹⁴ Serum transaminase lev-

els in patients with obstructive jaundice were below 200 units; if they were higher than 200 units, they were associated with hepatic necrosis rather than obstruction.¹⁴ The serum transaminase level is not helpful preoperatively in differentiating extrahepatic obstructive jaundice from jaundice caused by metastases.²⁹

Serum transaminase levels in a patient with obstructive jaundice were determined at our hospital. These levels and the liver function tests are summarized in Table 5. Cholecystectomy was performed on this patient eight days after the first serum transaminase determination was done. It is difficult to explain the cause of the elevation in this patient; it is likely that he had obstruction of the common duct and hepatitis.

Carcinomatosis

Elevated serum transaminase levels in patients with primary and metastatic carcinoma of liver have been noted.^{3,28,29,4,19} Involvement of the liver by lymphoma or leukemia does not increase the level of serum transaminase.^{19,29} In non-malignant and malignant bone disease with no hepatic involvement the level is not elevated,

TABLE 5

Hospital Day	1st	8th	14th	17th
oxalacetic transaminase, units/ml.	2000			1300
pyruvic transaminase, units/ml.	750			710
total protein, gm./100 ml.	6.20			6.1
albumin	3.28			3.3
globulin	2.92			2.8
alkaline phosphatase	5.1			3.7
bilirubin				
total	10.4	15.6	9.4	>12.8
direct	6.4	9.4	5.2	8.0
indirect	4.0	6.2	4.2	4.8
thymol turbidity	15.0			16.5
cephalin flocculation	4+			4+
cholesterol				123
cholesterol esters, %				82

even though the serum alkaline phosphatase level is up.^{4,19,28,29}

We studied one serum transaminase level in a patient with metastatic carcinoma to the liver. The results are summarized in Table 6. The autopsy of this patient showed carcinoma of the common duct with metastatic carcinoma to the liver and lungs.

TABLE 6

Hospital Day	1st	13th	19th	21st
oxalacetic transaminase, units/ml.				117
total protein, gm./100 ml.	6.7			
albumin	4.5			
globulin	2.2			
alkaline phosphatase	11.0			
bilirubin				
total	1.6	17.8		
direct	1.3	10.2		
indirect	0.3	7.6		
thymol turbidity	2.2	9.0	7.3	
cephalin flocculation	negative	2+	3+	

Acute Pancreatitis

It has been reported that the majority of patients with acute pancreatitis have an elevation of serum transaminase level. However, there is no correlation between the levels of serum transaminase and serum diastase.^{3,4} No cases of acute pancreatitis were observed at our hospital.

Cerebral Vascular Accidents

Normal serum transaminase levels in patients with cerebral vascular accidents have been re-

ported.^{2,3,4} More recently, Lieberman and others reported on 21 patients with cerebral vascular accidents.¹⁸ Nine had normal levels. Twelve had elevated levels and in three, the elevated levels were associated with myocardial infarction. These authors reported that the maximal serum transaminase activity is reached approximately 48 to 72 hours following the onset of the illness. The levels do not appear to be as great as in many myocardial infarctions. Cerebral hemorrhage and thrombosis were followed by similar degrees of transaminase elevation.

Four serum transaminase determinations were done on three patients with cerebral vascular accidents. The results are summarized in Table 7.

TABLE 7

Case	Transaminase, units/ml.	Diagnosis
1.	22	cerebral hemorrhage
2.	60	cerebral arteriosclerosis
	28	
3.	5	cerebral embolism

One of these patients had a high serum transaminase level which came down to normal after four days. It appears that transaminase determination is of limited value in the diagnosis of myocardial infarction when the picture suggests a severe primary cerebral vascular accident. Green et al. reported that the cerebral spinal fluid transaminase concentration in clinical cerebral infarctions was increased, with normal transaminase levels in serum.⁸

Bodily Trauma

Lieberman and co-workers reported 50 serum transaminase levels in patients with injury and with no evidence of heart trauma.¹⁷ Over 50 per cent of injured patients showed elevated levels in the absence of demonstrable cardiac injury. Contusion and tearing of striated muscle, causing liberation of the enzyme, resulted in most of the observed increases in transaminase activity. No cases of this type were observed at our hospital.

Pseudohypertrophic Muscular Dystrophy

Ritter and Seligson recently reported that

four children with pseudohypertrophic muscular dystrophy showed abnormal elevation in serum glutamic oxalacetic transaminase and increased urinary coproporphyrins.²⁵ No patients with this condition were studied at our hospital.

Diseases In Which Serum Transaminase Levels Are Within Normal Limits

Wroblewski and LaDue reported diseases in which the serum transaminase levels have been found to be within normal limits in the absence of damage to the liver, heart, or skeletal muscle.²⁹ These conditions are summarized in Table 8.

TABLE 8

<i>Neoplastic</i> carcinoma melanoma osteogenic sarcoma lymphoma teratoma sarcoma	<i>Allergic</i> hay fever asthma urticaria allergic dermatitis
<i>Infections</i> pneumonia tuberculosis cystitis pyelonephritis wound infection empyema acute cholecystitis thrombophlebitis meningitis	<i>Degenerative</i> multiple sclerosis muscular dystrophy nephrosclerosis osteoporosis osteoarthritis
<i>Reactive</i> rheumatoid arthritis rheumatic fever (without carditis) chorea lupus erythematosus polyarteritis nodosa	<i>Metabolic</i> hypothyroidism or hyperthyroidism Addison's disease panhypopituitarism uremia uremic pericarditis

We made 31 serum transaminase determinations in patients with such conditions. The level was normal in all.

Other Serum Enzymes

Several investigators have studied other serum enzymes that might prove more useful as clinical diagnostic aids in determination of the presence of active tissue necrosis. These include lactic dehydrogenase, aldolase, and glutamic pyruvic transaminase. Pyruvic transaminase is said to be

more sensitive than oxalacetic transaminase in depicting acute hepatocellular damage, and less sensitive in indicating acute myocardial necrosis.^{5,9,27}

Chinsky and associates presented comparisons between the oxalacetic and pyruvic transaminase levels.⁵ They said the elevation of oxalacetic transaminase level in a patient with myocardial infarction was much more significant than that of elevation of pyruvic transaminase. Pyruvic transaminase levels were elevated in some and normal in others. In patients with hepatitis, pyruvic transaminase levels were higher than were those of oxalacetic transaminase. But pyruvic transaminase was not observed to be a uniformly more sensitive or a more specific indicator of hepatic necrosis. The usefulness of these serum enzymes in diagnosis should be investigated further.

SUMMARY

In an examination of the present status of our knowledge about serum transaminase activity, levels of the enzyme were determined in patients in various disease states. Eighteen of 35 patients with myocardial infarction had elevated levels, and a majority of patients with coronary insufficiency had normal levels. Serum transaminase levels in patients with hepatitis, cirrhosis of the liver, obstructive jaundice, or carcinoma of the liver were elevated. These levels are not helpful in differentiating obstructive jaundice from jaundice caused by hepatitis or primary or metastatic carcinoma.

Several investigators have studied other serum enzymes to compare their activity with that of transaminase. The usefulness of these serum enzymes in diagnosis including serum glutamic oxalacetic transaminase, should be investigated further.

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Chlorpromazine — Four Years Later

WERNER TUTEUR, M.D.* ROCHUS STILLER, M.D.** JACOB GLOTZER, M.A.***, ELGIN

After the continuous four year use of a given drug on a specific clinical syndrome in psychiatric patients, an assessment is possible and permissible. Previous reports have demonstrated the principle of systematic survey and the methodology of this project which by now has entered its fifth year at Elgin State Hospital.^{1,2,3}

Patients selected for this study (females only) showed the following symptoms: incontinence, combativeness, destructiveness, noisiness, and denudativeness. The emphasis of this paper is placed on discharged patients who, after chlorpromazine treatment, entered social recovery and continued chlorpromazine treatment after discharge under clinic supervision.

The relative increase in returns as the years progress is significant and will be dealt with later, when the length of absence and the reasons for return of the discharged patients will be discussed.

A previous paper showed that the over-all return rate during the first year after discharge from Elgin State Hospital was 37.1 per cent.³ These were patients of all categories *not* systematically treated with chlorpromazine after leaving.

Ages and hospitalization length of all project patients treated remained static during the fourth year of the study. As before, the largest sector of patients treated was 41 to 50 years old.^{1,2,3}

TABLE 1. GENERAL INFORMATION
TOTAL PROJECT DATA AS OF FEB. 23RD OF EACH YEAR

	After 2 years 1955-57	After 3 years 1955-58	After 4 years 1955-59
Patients treated	517	736	822
Expired due to reasons other than drug therapy	7	23	44
Conditionally discharged, followed by systematic treatment with chlorpromazine	161	220	258
Returns	23=14.2%	45=20.4%	77=29.8%
Remaining out of institution	138	175	181

TABLE 2. ALL PROJECT PATIENTS
HOSPITALIZATION LENGTH CHANGES

	No. of Patients
Less than one year	49
1-5 years	218
6-11 years	174
11-15 years	152
16-20 years	103
21-26 years	89
26-30 years	21
31-35 years	13
36-over years	3
Total	822

Figures in Table 2 indicate chronicity of illness.

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DOSAGES, LENGTH OF TREATMENT, AND SIDE EFFECTS

Dosages on inpatients continue to range from 100 to 1,200 mg. orally, or 50 to 150 mg. intramuscularly, daily. Dosages on outpatients vary from 50 to 800 mg. orally. Liquid Thorazine® concentrate and sustained release capsule capsules likewise are being employed. Patients are considered refractory to treatment only after one year of unsuccessful response to the drug has elapsed. With the passing of the years we have become alert to minimal signs of extrapyramidal symptoms and to beginning jaundice and skin eruptions. Immediate discontinuation or decrease of medication has avoided the development of full-blown complications in these

DISCHARGED PATIENTS REMAINING OUT—AS OF FEBRUARY 23rd, 1959

TABLE 3. AGES AND HOSPITAL LENGTH

Ages (at time of discharge)	No. of Pts.	Hospital length (at time of discharge)	No. of Pts.
Under 20 years of age	2	Less than one year	25
21-30 years of age	31	1-5 years	71
31-40 years of age	56	6-10 years	54
41-50 years of age	66	11-15 years	24
51-60 years of age	18	16-20 years	6
61-70 years of age	8	21-25 years	1
Total	181	Total	181

areas. No blood dyscrasias developed within the 822 patients of this study.

TABLE 4. LENGTH OF TIME AWAY FROM INSTITUTION

Months	No. of Patients
43 (and over)	6
37-42	36
31-36	24
24-30	34
18-23	32
12-17	16
6-11	18
1-5	12
Less than month	3
Total	181

By now, six patients have been away from the institution for more than three and one-half years, 36 for three to three and one-half years, 24 for 31 to 36 months, and 34 for more than two years. The majority—namely, 100 patients—have been away for more than two years.

THE DRUG CLINIC

Elgin State Hospital provides the drug gratuitously to discharged patients on this study. They appear at three week intervals. The operational cost of this clinic is reasonable, as reported elsewhere.⁴ The details of operation have been described and need not be repeated.^{1,2,3}

The 43 gainfully employed patients work as salesladies, typists, maids, laundry workers, or in sundry occupations. Twelve patients were placed by our Social Service Department with families where they help with household chores and receive remuneration. Job changing is the exception rather than the rule with these groups. The two patients who died were 71 and 43 years old. Death was caused by arteriosclerotic heart disease and carcinoma of the breast, respectively. Those whose activities are unknown (24) are so-

TABLE 5. ACTIVITIES OF PATIENTS REMAINING OUT OF INSTITUTION

Gainfully employed	43
Wage placement (family care)	12
Keeping house independently	57
Keeping house under supervision	32
Idle at home	3
Transferred to other institutions	1
Transferred to other clinics	3
Moved to other states	2
Left permanently for abroad	2
Died	2
Unknown	24
Total	181

called drop outs, who have not appeared at the clinic for more than one year. To our knowledge, they have not returned to other institutions. Excluding the 10 otherwise accounted for,* the remaining 147 patients continue to attend the clinic; they comprise 85.9 per cent of those out of the hospital. Most patients undertake an 80 mile round trip to attend the clinic.

RETURNED PATIENTS

TABLE 6. REASONS FOR RETURN TO INSTITUTION (77 PATIENTS)

<i>A. Relapses</i>	
(1) In spite of taking drug regularly	26
(2) Due to irregular clinic attendance	18
(3) Due to unco-operativeness as to taking drug	7
(4) Placebo relapses	5
<i>B. Did not relapse, but</i>	
(5) Family unable or unwilling to keep patient	16
(6) Patient desired to return	5
Total	77

Not all returns were clinical relapses. Actually, a mere 26 patients relapsed while taking the drug diligently and regularly, to our knowledge. This comprises only 33.7 per cent of all returns, or 10 per cent of the total of 258 dis-

*Transferred to other institutions (1), clinics (3), moved to other states (2), left for abroad (3), and the two who died

charged patients. Irregular clinic attendance was largely due to the attitude of the families, but unco-operativeness regarding taking the drug may well be an expression of the patient's mental illness. Placebo relapses are dealt with later, in Table 8. Sixteen families declared themselves unwilling or unable to have a mental patient around their home, giving various reasons for this attitude. In none of these instances had the patient clinically relapsed. Of the five patients who desired to return, four felt dissatisfied with the family where Social Service had placed them.

Actually, then, only categories 1, 2, 3, and 4 represent clinical relapses, for all practical purposes. They involve 56 patients (amounting to 21.7 per cent of the total discharges of 258).

TABLE 7. LENGTH OF ABSENCE FROM INSTITUTION OF RETURNED PATIENTS

Months	No. of Patients
41	1
31	2
24-30	6
18-23	12
12-17	7
6-11	19
1-5	24
Less than month	6
Total	77

Of the returnees, 49 returned during the first year; 12 after having been away 18 to 23 months; and nine after an absence of two to three and one-half years. There is unanimous agreement that adjustment difficulties for patient as well as family are greatest during the first two years after discharge.

A number of patients were placed on placebos having identical appearance as the 100 mg. Thorazine tablet, as was done previously, as a control measure.^{2,3} During the second year of the study 33 patients had been so placed; during the third year, 57; and during the fourth, 72. Many a patient left the institution still taking 600 mg. of chlorpromazine a day. As time went by, a considerable number of patients were reduced gradually to 100 or 200 mg. a day.

Patients for the placebo study were selected from the latter group. They appeared to have consolidated their social recovery on these dosages, had secured employment, or kept house independently. An average of 10 months had

PLACEBO PATIENTS

TABLE 8. PLACEBO GROUP (72 PATIENTS)

Relapsed	43 patients (59.7%)
Longest period social recovery maintained on placebos	1 year, 2 months
Shortest period social recovery maintained on placebos	14 days
Average length of illness (in terms of hospitalization length plus time away from institution after discharge)	8 years, 10 months
Longest duration of illness	29 years
Shortest duration of illness	3 years, 2 months
Returned to institution	5 patients
Did not relapse	29 patients (40.3%)
Longest period social recovery maintained as of February 23, 1959	2 years, 4 months
Shortest period social recovery maintained as of February 23, 1959	3 months
Average length of illness (in terms of hospitalization length plus time away from institution after discharge)	9 years
Longest duration of illness	22 years, 10 months
Shortest duration of illness	1 year, 10 months

passed since their discharge. Forty-three (59.7 per cent) of these 72 patients relapsed, showing symptoms similar to their pre-treatment clinical picture. Five of these had to be re-hospitalized, while the other placebo relapses improved sufficiently within several days after having been re-started on the drug.

DISCUSSION

This paper is an interim report. Another report covering a five year survey is to follow next year. For the sake of brevity and in order to avoid repetition, we once more refer to previous papers, especially 3.

It is of significance in this report that during the fourth year the over-all return rate increased from 20.4 to 29.8 per cent. However, attention is called to the fact that the majority of returns, 68 patients out of 77, occurred during the first two years (Table 7). On the other hand, it is most gratifying to see that of the 181 patients remaining away from the institution, 100 were discharged more than two years ago (Table 4). This indicates that the first two years appear to be the most difficult and critical ones. The high placebo relapses [59.7 per cent] indicates the necessity for this particular type of patient to

continue taking the drug for years after discharge.

As a whole, we were able to remove 118 beds from the overcrowded cottages where this project is being conducted. These particular cottages would discharge from two to six patients a year before the introduction of chlorpromazine. In this light, the use of chlorpromazine remains highly beneficial and fully justified.

SUMMARY

1. A four year continued survey was made of once nude, incontinent, combative, destructive, and noisy patients, the majority of whom had hospitalizations of one to 15 years, who were treated with chlorpromazine.

2. Of 822 patients treated, 258 were discharged and 77 returned (29.8 per cent). Returns were due to various reasons and motivations (Table 6). Such returns should not be confused with relapses. Only 26 of the 77 returnees represent relapses while taking the drug diligently.

3. Fifty-five of the 181 patients remaining outside the institution have found gainful employment. Twelve of these 55 were placed by Social Service with families, where they receive remuneration for their services.

4. A special drug clinic functions on our premises, dispensing drugs to discharged patients free, and supervises their course of rehabilitation. Placebos were given to 72 discharged pa-

tients; 43 of them relapsed, indicating that this particular type of patient, who had lengthy hospitalization and who was severely regressed prior to treatment, may need drug treatment for an indefinite time.

5. By now, six patients have been away from the institution for three and one-half years and 36 for more than three years.

6. A four year assessment of chlorpromazine used on once highly regressed patients, with lengthy hospitalizations, then discharged, permits the conclusion that this is an indispensable mode of treatment.

Our gratitude is extended to Mrs. Gathel Barnes who was extremely helpful in gathering statistical data.

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Contact Lenses

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Corneal lenses basically are a segment of a sphere. The lenses may be divided into three parts for the sake of discussion: a central part, an edge, and the intermediate zone between these two areas. Corneal lenses differ only in the manner in which the inner surface of the edge or the inner surface of the intermediate zone is fabricated. The inner surface of the edge is beveled. The bevel is of a greater radius of curvature than the central part, inadvertently varying extensively with some manufacturers from lens to lens, while others maintain a high degree of accuracy. The intermediate part of the inner surface of the lens at present is being treated extensively by manufacturers with various and sundry curves. You will hear the name paraboloidal—meaning a parabolic curve. Others have a bi-curve or tri-curve lens—meaning they have in this intermediate zone a radius of curvature usually greater than the central zone to produce a flattening effect. Others have anywhere from one to 40 or more holes drilled in this area, usually neatly spaced from each other. Still others have facets of micro-thinness on the inner surface near the edge, to act somewhat as supports to produce a clearance between lens and cornea. The effectiveness of some of this added fabrication remains to be proved experimentally. The lenses have refracting optics ground on the outer surface. They also can be had in lenticular form and bifocal. The central inner surface may be spherical or astigmatic, occasionally intentionally. More commonly, in the case of some manufacturers, it is unintentional, particularly those that were molded by older techniques. These are actually warped lenses.

Corneal scleral lenses are essentially corneal lenses with a flange that covers the sclera. The flange varies in width, and may or may not have added fabrication of pockets, channels, or holes. Substitution fluids are no longer prescribed as it has been established that the patient's tears or precorneal fluid are superior.

The contact lens fitter knows the cornea's sphericity is confined to its central one-third, and the periphery gradually flattens as it approaches the sclera, somewhat as a revolution of an ellipsoid, varying to a degree in all meridians. The ophthalmometer today is used to measure the radius of curvature of the central meridians of the cornea. It can and is less frequently used to measure those of other areas of the cornea. The flattened radius of curvature of the central meridian is considered most important as a reference point and is called the "K" reading. A segment of a sphere (as a corneal lens or the corneal section of the corneal sclera lens) can be fitted to the cornea basically in three different ways, so that its inner surface is of the same radius of curvature, (on "K"), a shorter (steeper) radius of curvature or a longer (flatter) radius of curvature than that of "K". The former two procedures usually have intermediate zone fabrication to flatten this area, but the latter may or may not.

The size of the corneal lens is empirically ordered, depending upon the experience of the fitter, the prominence of the eyeball, and the weight of the lens. The more prominent eyes and heavier lens usually are fitted larger. The most popular sizes are from 9 to 10 mm. in diameter. The corneal scleral lens must be fitted to clear the limbus or be small enough when using corneal lens so that all or the greater part of the lens will be within the limbal area. Interference of the metabolism of the vascular area by pressure transmitted from the lids by lens, particularly on blinking, causes adverse physiological effects.

The bevels can be measured accurately by means of magnification and tool maker's linear scales, but the amount of flattening that is fabricated in the intermediate zone defies accurate measurement at present.

To overcome this problem, after the lenses are

placed on the eye and tearing subsides, a drop of conventional fluorescein is instilled on the eye and an ultraviolet ray lamp is used to study the fluorescein pattern with the lens centered over the cornea. The "K" reading of the cornea and the radius of curvature of the inner surface of the contact lens must be known, otherwise the patterns seen to a degree are valueless. For example, a pattern that has a central fluorescent pool and a dark ring in the intermediate zone area may be a lens that was fitted flatter, steeper, or on "K"—one of any of the three basic procedures used in fitting a lens. On the other hand, a lens that has two black areas, one near the center and one in the periphery usually is a flat lens. A lens fitted on "K" that initially had a central fluorescent pool, after intermediate zone fabrication, can alter the pattern to where the fluorescent pool tends to disappear.

Adjustments made to lenses consist of flattening the intermediate areas, cutting down the size of lens, changing the bevel widths, reshaping the edge, or polishing irregularities of any of the above. The fitter is guided by the patient's complaints, any visible corneal irregularities including a change in the "K" reading, a study of fluorescent patterns with the use of an ultraviolet lamp or slit lamp or both, and examination of the lens for any improper fabrication.

Corneal scleral lenses may be fitted from molds of the patient's eye or by the use of trial lenses, similar to a degree as the fitting of shoes from a stock of shoes without measuring the foot. Measurements of the cornea may or may not be taken. Fluorescein and the obliteration of vessels are used to determine the points of pressure. These are remedied by grinding and/or polishing these areas. A hole in the periphery of the corneal section is considered important by most fitters for proper aeration and flow of precorneal fluid.

The advantage of corneal scleral lenses is that they cannot fall out, astigmatism may be ground into them, they are easier to grasp by the poor sighted, and—if fabricated to rest on the conjunctiva—they are initially more comfortable.

The disadvantages are: 1. They are bulky and take up considerable space between the eyelids and the eye where no appreciable space normally exists on lid closure. Thus they exert more pressure on the eye than the thinner corneal lenses.

2. They cover a large area and make it difficult to permit proper exchange of precorneal fluid; this interferes with precorneal fluid layer functions, upsetting precorneal and epithelial symbiotic activity. 3. Improper circulation of aqueous veins. Some, if not all of the pressure of the lens is carried by the scleral flange. It has been shown that an increase up to 14 mm. of mercury in the intraocular tension can occur from an embarrassment of the aqueous flow in narrow chambered angle cases. It also has been shown that there can be a reversal of flow in the aqueous veins for an hour or so after insertion. The precorneal vascular flow is embarrassed by the pressure of the scleral flange resting on these conjunctival vessels. Under slit lamp examination, stagnation of the vascular tree can occur with sludging and even sedimentation of blood. Many of the problems of scleral lens fitting are not due entirely to poor precorneal fluid circulation. Problems of the aqueous vein and vascular flow also must be considered.

The advantages of corneal lenses are: 1. Cosmetically they look less bulbous. 2. Less interference with corneal metabolism, provided they are fitted small enough and properly, so that the lens does not completely rest on the vascular part of the cornea (the limbus). They do not embarrass the aqueous or vascular flow as do the scleral lenses. They cover a smaller area and thus interfere less than scleral lenses with the functions of the precorneal fluid layer.

The disadvantages are: 1. No astigmatic correction can be fabricated. Corneal astigmatism is eliminated by the new anterior surface of the lens, and spherical equivalent powers are used to correct cases of lenticular astigmatism. 2. They fall out more easily than scleral lenses. 3. Initially they are more irritating.

Contact lenses, like false teeth, require a period of acclimation but differ in that wearing time is increased gradually from four to six hours initially by one-half to one hour per day until all day wearing time is achieved. The foreign body reaction of the lens causes tearing initially, photophobia, and the sensation of granules or roughness not unlike that of a lash in the eye. Burning, stinging, and itching are symptoms that eventually disappear. Halos may or may not disappear, depending on whether they are caused by edema of the cornea or by the lens itself. Stippling and abrasions during the

acclimation period are due to improper insertion or removal of the lens, too great an increase in wearing time, a foreign body under the lens, or improper fabrication or fit of a lens.

When all day wearing time is achieved, visual acuity should be the same as with spectacles and better, in case of irregular astigmatism and keratoconus. Aphakics gain a wider field of vision and an image size more toward the normal than with spectacles. Contact lenses have the same influence on muscular problems as spectacles.

Foreign bodies are a hazard and people who work in an extremely dusty environment should not wear them. The patient can expect to have good and bad days, as do persons with false teeth.

A wetting agent is used to clean the lenses, and lenses are soaked in a soaking solution at night.

The cornea has the ability to change its shape to that of the inner surface of the lens. The ideal situation occurs when the ophthalmometric readings do not change after the lens has been worn for a period of time. This is difficult, if not impossible to achieve on highly astigmatic corneas. The patient may not be able to see as well with his previous prescription spectacles on removal of his contact lenses. This is called spectacle blur if correctible by a different spectacle prescription. It is temporary, lasting from a few hours to a few days.

Lenses that are fit flatter than "K," as were the microlens, had a tendency to warp or flatten

the cornea temporarily to a point where moderate myopic patients saw well without any lenses.

The author believes two basic principles are obvious and should be emphasized: 1. Contact lenses should be fitted so that their physical substance causes the least amount of warpage or distortion of the physical anatomy of the eye. 2. They should be fitted so as not to interfere with the metabolism of the eye by (a) impeding the circulation, (b) impeding the aqueous vein circulation, (c) impeding the precorneal fluid circulation, and (d) causing injury to the epithelium.

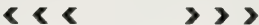
A contact lens is a prosthesis and must be respected as such. It acts as a splint as well as a means for correcting refractive problems.

SUMMARY

A short discussion of the procedures used in fitting of contact lens is presented with some advantages and disadvantages and a plea for adherence to basic principles.

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Iron Enzymes in Iron Deficiency States

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Dr. Beutler: Although iron deficiency is one of the most common disorders seen in clinical medicine, the basis for symptoms in iron deficient patients remains obscure. It usually is assumed that they are due to anemia, not only because hemoglobin is the most easily measured iron compound of the body but also because of the widely quoted assertion that iron enzymes are not affected in iron deficiency. This statement is not based on fact. Indeed, the following observations led us to suspect that anemia was not the most important cause of symptoms in iron deficient subjects: (1) some patients with low hemoglobin levels have only minimal symptoms; (2) some patients with relatively normal hemoglobin values have marked symptoms; (3) when iron is given therapeutically, clinical symptoms may subside considerably before there is any significant improvement in the hematologic picture; and (4) epithelial changes that occur in individuals with iron deficiency anemia are not seen in patients with other anemias.

We have chosen to study enzymatic activity in iron deficiency states produced experimentally in animals. In our earlier experiments, we produced iron deficiency in rats by repeated bleeding. Control rats were bled at the same rate but were fed a diet supplemented with iron. Iron deficient animals showed a decrease in the cytochrome C activity of liver and kidney which greatly exceeded the decrease in hemoglobin. In subsequent experiments, we used the classical method of producing iron deficiency: a milk diet fed to rapidly growing young rats. Again, we found decreased cytochrome C activity of the kidneys.

We then extended our observations to cytochrome oxidase, another heme — containing enzyme, and found it, as well as cytochrome C,

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This work originated from the Argonne Cancer Research Hospital operated by the University of Chicago for the United States Atomic Energy Commission.

was decreased slightly in the kidneys of iron deficient animals. We also were able to demonstrate a slight decrease in cytochrome oxidase activity in human white blood cells, but these determinations are difficult to do and we do not regard the results as entirely satisfactory from a technical point of view.

Another heme enzyme, catalase, may be studied more readily in human tissues. However, we found that the catalase content of human erythrocytes is maintained at normal levels even in patients with the most severe degrees of iron depletion. Similarly, the catalase of rat erythrocytes and rat liver remained at normal levels in rats with experimentally induced iron deficiency.

Thus far, all the enzymes mentioned contained heme groups. Succinic dehydrogenase is an iron enzyme not containing heme; we also have made measurements of this enzyme. In iron deficient rats, we found decreased succinic dehydrogenase activity in kidneys and heart; the activity of this enzyme in the liver was within the normal range.

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Aconitase, although not an iron enzyme, requires iron as a co-factor in the conversion of citric to cis-aconitic acid in the tricarboxylic acid cycle. This enzyme can be inactivated merely by incubating for about an hour at 37° C. Reactivation can be achieved by adding iron and a reducing agent such as ascorbic acid, but adding either of these alone is ineffective. In iron deficient rats, the aconitase activity of brain and liver is normal, but there is a questionable decrease of activity in the heart and a marked decrease of aconitase activity in the kidneys. To determine whether this decrease in enzymatic activity was due merely to absence of iron, acting as a co-factor in the reaction, we attempted to reactivate kidney homogenate from iron deficient animals with iron and ascorbate. No evidence of reactivation was obtained by this means, or by adding boiled normal kidney extract to the iron deficient kidney homogenate. However, when iron was given intragastrically to iron deficient rats, the aconitase activity soon returned to normal levels. Thus it would appear that the actual enzyme, aconitase, is depleted under conditions of deficiency of its co-factor, iron.

Because there are many clinicians in the audience, I would like to allude to some of the clinical implications of this work. In thinking about iron deficiency anemia, we must now consider, in addition to the well known decrease in hemoglobin, at least the possibility of depletion of iron enzymes and of enzymes requiring iron for their activity. Previously, 10 grams of hemoglobin was thought to be adequate for normal function and persistent symptoms of fatigue with hemoglobin values at about this level in otherwise healthy women usually were relegated to the vague area of psychoneurosis. Now we submit that we must consider the alternative possibility that a minimal decrease of hemoglobin levels may be associated with severe symptoms because of severe degrees of enzyme depletions in the tissues. This situation may be analogous to the findings of severe neurological symptoms in patients with pernicious anemia in the absence of anemia.

Clinically, therefore, it becomes important to diagnose correctly not only severe but also mild iron deficiency. Severe anemia is relatively easy to diagnose: the blood indices and blood smear almost invariably reveal microcytic, hypochromic red cells. A history of hemorrhage usually can

be obtained, and the plasma iron invariably will be low and the iron binding capacity elevated. On the other hand, it is much more difficult to establish the diagnosis of mild iron deficiency. All the red cell indices may fall within the normal range. The peripheral blood smear frequently appears normal. The plasma iron and iron binding capacity also may be normal. In our experience, the most certain way to establish the diagnosis of mild iron deficiency is to stain the sternal bone marrow for iron. In iron deficiency, the iron stores have been exhausted, and no stainable iron will be present. This test is reliable, except in patients who have received transfusions or parenteral iron therapy. Under these conditions, stainable iron tends to persist in the marrow even when the iron deficiency state has developed.

Dr. William E. Fishman, Assistant in Medicine: Is it practical to do a double blind study of the effects of iron therapy on symptomatic relief of patients with 10 or 11 grams of hemoglobin?

Dr. Beutler: We have done just such a study over the past two or three years in a group of women whose hemoglobin was over 12 grams per cent, but who suffered from abnormal fatigue.

Sahli, soon after having developed his well known method for clinical hemoglobinometry, found that some young women with symptoms of chlorosis had no anemia. However, after iron therapy, their blood hemoglobin level increased slightly and symptoms disappeared. Jasinski has written many papers and a book on what he calls "masked iron deficiency"—that is, symptomatic iron deficiency without anemia. Neither of these observers carried out any control studies.

In our investigation of women who complained of tiredness and lassitude, other clinical disease was ruled out first. Because of the great subjectivity of complaints of this type of patient, the greatest care was taken to eliminate bias. Each woman served as her own control. Iron and placebo were administered alternately. Clinical observation of the patients was made without knowledge of (1) whether the patient was receiving iron or placebo, (2) what the patient's plasma iron or iron binding capacity was, or (3) what the patient's marrow iron stores were. Marrows were identified only by code numbers and were interpreted without reference to clinical records. Of 17 women whose marrow stores

proved to be depleted, five preferred placebo, but 12 preferred iron therapy. These results may be contrasted with a group of 11 women whose marrow stores proved adequate. Five of these preferred placebo, only four preferred iron, and two were undecided. While not entirely conclusive, these results are highly suggestive that mild iron deficiency can produce symptoms, even when the patient's hemoglobin is within normal range. We were interested to observe a slight, but statistically highly significant increase of hemoglobin levels in the iron deficient group, but not in the normal group during iron administration. There was no change in the hemoglobin levels of either group during the period of placebo administration.

I do not recommend widespread use of bone marrow examination by untrained individuals because of the difficulty in preparation and interpretation of celloidin sections, as well as the possibility of complications arising from the procedure. Much work needs to be done to develop a simple, practical means of distinguishing iron deficient, nonanemic patients from normal subjects.

Dr. Burton R. Andersen, Assistant in Medicine: Are the differences in enzyme activity sufficiently sensitive to be used in diagnosis?

Dr. Beutler: The only tissue that can be biopsied conveniently in human subjects is the blood. The metabolism of human red cells is incomplete and most of the known iron enzymes are not found in erythrocytes. One of the exceptions is catalase but the activity of this enzyme is not decreased in iron deficiency. The study of white cells and platelets is much more difficult for technical reasons, and we are still searching for a good clinical enzyme assay to use in evaluation of iron deficient patients. It may be possible to demonstrate altered metabolism in iron deficient subjects by some indirect means. In an attempt to do this, we have loaded subjects with exogenous citrate, but we do not find any consistent differences in the metabolism of exogenously administered citrate in iron deficient subjects.

Physician: In cases of pernicious anemia, the diagnosis is masked occasionally by prior partial therapy. Does a similar problem prevail in the diagnosis of iron deficiency anemia?

Dr. Beutler: Orally administered iron is stored

in the marrow so poorly that iron therapy will not mask iron deficiency if examination of the bone marrow is used as the criterion. It will affect the red cell indices and the plasma iron in a short time. Parenterally administered iron is stored rapidly in the reticuloendothelial cells, and while it sometimes appears not to be readily available for the metabolic requirements of the subject, these cells stain by histochemical methods and may, in a sense, mask an iron deficiency.

Dr. John Louis, Instructor in Medicine: We also have studied the subjective responses of pernicious anemia patients to injections of B₁₂. It seemed to us that the responses of both normal and diseased patients were capricious and motivated in many cases by their expectations of relief from medication.

Dr. Beutler: I agree that it is difficult to evaluate patients' subjective complaints. This is why we felt it necessary to resort to the double blind technique in studying the problem of response of symptoms to iron therapy in nonanemic women. As in other double blind studies, the placebo reactor rate is high, both in the iron deficient and in the control group.

Dr. John Louis, Instructor in Medicine: There would seem to be no common agreement among hematologists regarding the normal lower limits of blood hemoglobin. How do you define the lower limits of normal?

Dr. Beutler: This is difficult to answer, but the question is a practical one. Each patient has his own normal range, and yet when you see a patient for the first time, you do not know what normal is and must accept some arbitrary figure below which the patient is considered anemic. The lower limit of normal of males should probably be 14.0 grams per cent. In females, I think I would accept the figure of 12.0 grams per cent, recognizing, however, that many women with 12 or 12½ grams per cent hemoglobin levels are iron deficient and that their hemoglobin may rise to 14 or even 15 grams per cent, when iron is administered.

Dr. George Gee Jackson, Associate Professor of Medicine: There would seem to be no problem with the detection of iron deficiency in gross states. In the mild case, however, is it not necessary to consider inadequate absorption of iron

or poor utilization of iron at the end organ as well as blood loss?

Dr. Beutler: We have not been consistently successful in clinically correlating the iron deficiency with the menstrual flow history. Undoubtedly, problems in absorption contribute in some patients, but rarely are of primary importance. Certainly there are anemias due to poor end organ utilization of iron, but I would not classify these as being iron deficiency anemias, since they do not respond to iron administration.

Dr. Charles Davis, Instructor in Medicine: Why does the catalase activity remain normal in iron deficiency?

Dr. Beutler: If the role of catalase is, as we generally consider it to be, to break down peroxide complexes as they form in the body, it certainly appears teleologically unsound for the body to maintain normal catalase levels. The

amount of catalase in the red cells, for example, is much greater than the amount required to keep peroxide at a low level. Various enzyme systems compete for iron in iron deficiency. Apparently catalase is the most efficient, hemoglobin is less efficient, and cytochrome is the least efficient of those studied.

Dr. Hans G. Griebel, Instructor in Medicine: Why are iron tolerance curves not practical?

Dr. Beutler: They are practical but not reliable. The test, I'd like to say for those who are not familiar with this procedure, it is similar to the glucose tolerance test. A load of iron is administered orally, and the serum iron is measured at intervals. It has been stated that a high iron tolerance curve indicates an iron deficiency state while a flat curve indicates adequate iron stores. There are many exceptions, and we do not regard the results as sufficiently consistent for this test to be clinically reliable.



Double blind technique

Nor is advertising a hit-or-miss business based on inspirations and brainstorming alone. Rather does it depend on such practical research as that on the artwork problem of whether girls being kissed should have their eyes open or closed. The lady employees of Boughten, Bartered, Destined, and Orseborne itself were questioned and voted 75 per cent in favor of the blind if not the double-blind technique. *Editorial. Huckster's Revenge. New England J. Med. Apr. 23, 1959.*

Psychological factors in vomiting

Twenty-nine primiparae who suffered from vomiting of early pregnancy were compared with a control group of pregnant women who did not vomit. Assessment of psychological factors revealed no significant difference between the two groups. An androgyny score, derived from the body measurements, showed a slight but significant deviation towards masculinity in the women with vomiting. *A. J. Coppen, M.D. Vomiting of Early Pregnancy—Psychological Factors and Body Build. Lancet Jan. 24, 1959.*

Diet, Exercise, and Coronary Disease

GEORGE V. MANN, M.D., NASHVILLE, TENN.

The true causes of coronary heart disease are unknown. Lacking this information, we have neither preventive nor treatment. Yet we hear on every side exuberant claims and profound predictions of near solutions. In this confusion patients with known coronary disease—and well people also—are subjected to unwarranted treatments and dreadful warnings.

The Madison Avenue techniques that have persuaded so many physicians and laymen that coronary disease is caused by excessive fat in the diet has obscured other equally creditable hypotheses of causation. One is the proposal that physical inactivity is somehow related to the incidence of coronary heart disease. So far as I can find, this proposal was made by Percy Stocks, former Registrar General of Great Britain. Creditation of such an idea may be hazardous because self-righteous indignation with slothfulness must go back to the origin of our species. The evidence relating exercise or lack of it comes from several sources.

Studies of vital statistics according to classification by socioeconomic status, as with the British social classes, have shown a regular relationship with mortality assigned to coronary artery disease. For example:

COMPARATIVE CORONARY DISEASE MORTALITY INDEX —
GREAT BRITAIN, 1950¹

Social Class	Male	Female (Married)
I	150	92
II	110	93
III	104	101
IV	79	100
V	89	108
All	100	100

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While the Nutrition Committee of the Chicago Heart Association is sponsoring this article, the opinions expressed are those of the authors and do not necessarily represent the official view of that committee.

Now, we could argue effectively that this relationship is caused by differences in medical care and diagnosis available to the several groups. Physicians and lawyers of Social Class I must have had more and better diagnostic facilities available to them than farm workers in Class V. However, the married women in the same population should have had the same care available and yet their mortality trend is different.

It may surprise some to learn that measurements of energy expenditure in several occupations reveal that housewifery is a high work job and ranks with bricklaying (4.0 cal./min.), finish carpentry and lathe operating (4.4 cal./min.)—all well above the expenditure of the “desk jockeys” (1.5 cal./min.).² The occasional disagreement with such occupation—mortality relationship is not convincing because of the limitation of the sampling and classifications of energy expenditure used.

Studies in a more directed way have been done with human subjects by Morris and Raffle.³ Bus drivers who sit and steer were found to experience more coronary heart disease during a period of surveillance than the conductors who walked up and down collecting. But, do conductors select this job? The men may not have the disease because of the job; they may select their jobs because of the disease or for another neglected reason truly associated with causation. In the same way, we are confounded in explaining the small but definite association of smoking with coronary heart disease. Does smoking cause coronary heart disease or does it, along with coronary heart disease, represent a common prior factor causal of both?

Finally, there is some laboratory evidence relating exercise to atherogenesis if we are willing to make the simplifying assumption that serum cholesterol levels reflect the status of atherogenesis. My colleagues and I have shown that fatness is weakly but significantly associated with hypercholesterolemia.⁴ Exercise and fattening ob-

viously are related in an inverse manner. Furthermore, we could show that exercise would block the hypercholesterolemic effect of overeating.⁵ This relationship is reminiscent of the immunity to glucosemia that exercise confers upon the diabetic. Again, with chickens, exercise will retard the cholesterolemic effects of feeding cholesterol.⁶ How this effect is mediated biochemically is unresolved.

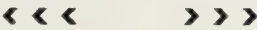
If exercise and physical conditioning seem prosaic preventives of coronary heart disease in the face of exotic drugs and elegant dietary regimens, we should reflect upon that penetrating observation of Professor W. M. Arnott: "The ready acceptance of the 'stress and strain' concept is very understandable. It nourishes the *amour propre* of the believer and it is readily acceptable to the unfortunate victim and his relatives. It places ischemic heart disease in the position of being the unjust reward of virtue. How much nicer it is when stricken with a coronary thrombosis to be told it is all due to hard work, laudable ambition, and selfless devotion to duty than to be told it is due to gluttony and physical indolence."⁷

Certainly, experimentalists should look to the

effects of exercise upon lipid metabolism and vascular disease. Exercise is likely to have a biochemical relation to lipid metabolism. It also may be the important influence in the maintenance of collateral circulation in impaired coronary vascular trees. Considering all the other dividends, regular exercise can be recommended as a reasonable, pleasurable, and profitable enterprise for all—patient, physician, and the apprehensive layman.

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Single injection for hay fever

Until stable emulsified extracts become commercially available, this method is not applicable to general usage. We would suggest that this method be used with caution and respect by those who have the facilities for this type of work. Whether it is a step forward in their effort to

treat pollenosis effectively but more simply is a question to be answered in the future. In summary, we consider this method of administering extracts at least as effective clinically as the orthodox aqueous treatment. *Robert A. Cooke, M. D. Single Repository Injection Treatment of Hay Fever. Panel Discussion. New York J. Med. May 1, 1959.*

The Treatment of Meniere's Disease with Ultrasonic Waves

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The classical triad of Meniere's disease is characterized by recurring attacks of vertigo, tinnitus, and deafness. The underlying pathophysiology has been termed "endolymphatic hydrops" by Williams.¹ Hydrops is supposed to be the result of anomalies in the production or resorption of endolymph or of changes in the quality or quantity of the endolymph and in the permeability of the membranes.² Lindsay has demonstrated dilatation of the cochlear duct in patients with Meniere's disease by histologic examinations of the labyrinth.³

Experience has shown that medical management of Meniere's disease is not entirely satisfactory. Surgical destruction of a diseased labyrinth has been restricted to cases in which the disease appeared to be unilateral and hearing in the affected ear had fallen below the practical speech level. The disease may appear to be unilateral initially, but becomes manifest later in the opposite ear. Surgical destruction of the labyrinth implied a sacrifice of the residual hearing. Although hearing may appear to be below the serviceable level, considerable fluctuations in cochlear function frequently are observed in Meniere's disease, indicating only a temporary functional suppression of the cells of Corti. Dandy's procedure of partial section of the eighth cranial nerve involved a major surgical procedure.⁴ A suboccipital craniectomy was performed, the cisterna drained, the cerebellum retracted, and the proper portion of the eighth nerve selected and sectioned. Even in the most skilled hands, cochlear fibers have been sectioned and vestibular fibers remained intact, with the result that loss of hearing occurred and vertigo persisted.

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A new treatment for Meniere's disease is proposed, to attain a selective destruction of the vestibular labyrinth with ultrasonic waves, with preservation of hearing. The present technique is based on the work of Arslan^{5,6,7} who—in presenting his initial series of 184 cases at The Fifth International Congress of Otorhinolaryngology in Amsterdam—reported favorable results in 94 per cent of cases operated at the end of a one year study. Encouraging results have been reported also from Zurich and Edinburgh clinics.^{8,9}

The Arslan technique may be defined as the direct application of ultrasonic waves to the vestibular labyrinth, resulting in attenuation or destruction of *vestibular* function without impairing *cochlear* function. Arslan set forth two essential conditions in the construction of an ultrasonic apparatus for treating the inner ear:

1. "The ultrasonic emitter should be thin and narrow, and produce irradiation of an intensity sufficient to enable a relatively rapid destruction of the labyrinth through the bony wall of the semicircular canal.

2. "No ultrasonic energy should escape from the walls of the emitter, as in that event, application of the ultrasonic emitter to the antrum would involve considerable hazards, such as facial palsy."

In accordance with Arslan's directions, the apparatus in standard use was constructed by Federici of Milan, Italy. The frequency produced is approximately 800,000 cycles per second. Intensity is measured in watts per square centimeter and a dosimeter indicates the effective power emitted by the applicator (transducer, erogator). A centrifugal pump circulates oil to cool the piezo-electric element that generates the high-frequency sound waves. The special applicator has an active surface area of 0.2 sq. cm. and can deliver up to 12.5 watts/cm.² A metal jacket

on the emitter eliminates the possibility of lateral transmission of energy.

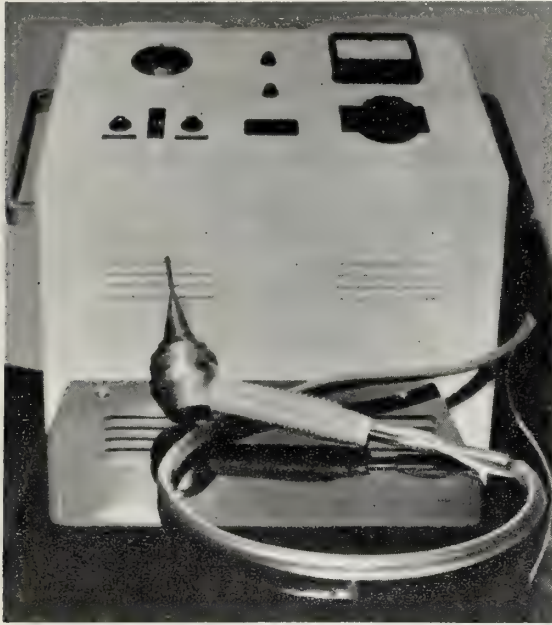


Figure 1. Ultrasonic apparatus produced by Fed-erici of Milan.

The biological effects of ultrasound are three-fold: mechanical, thermal, and chemical. The relative importance of these three effects is not clearly defined. Possibly their importance varies in different circumstances. While the biological and therapeutic effects are far from being clearly understood, we do know that the effect on living tissue may be temporary and reversible with weak or therapeutic dosage; or progressive and destructive with stronger dosage. The margin between these doses is small and tissues vary in their degree of sensitivity to ultrasound, nervous tissue being particularly sensitive. If an area made up of tissues of varying densities is irradiated, the effects are greatest at the interfaces—i.e., at the level of changes in tissue density. Consequently, periosteum and endosteum show the initial and more intense reaction.

The histological effects of ultrasound on the labyrinth have been described by Arslan's associate DeStefani.¹⁰ Irradiation of the labyrinth in dogs resulted in destruction of the neuro-epithelial cells of the ampullary crista. I have irradiated the labyrinths in a series of monkeys, and sacrificed the animals at varying intervals postoperatively, using intravital fixation with Wittmaach's solution. Progressive degeneration

of the neuroepithelium of the crista was observed over a six-week period. Edema, precipitates, and pyknosis were evident in one week. Detachment of the neurosensory epithelium was observed at three weeks. Complete neuroepithelial degeneration was present at six weeks.

It is essential that the operative procedure be conducted under local anesthesia, as the course of the operation is determined by the nystagmus reactions. I have modified Arslan's procedure in that I use the endaural approach routinely. This technique has not resulted in irradiation of the facial nerve, as Arslan postulated. Antrotomy is performed to expose the semicircular canals, without disturbing the ossicular chain. The labyrinth is skeletonized and the bony horizontal semicircular canal flattened with the diamond cutting burr.

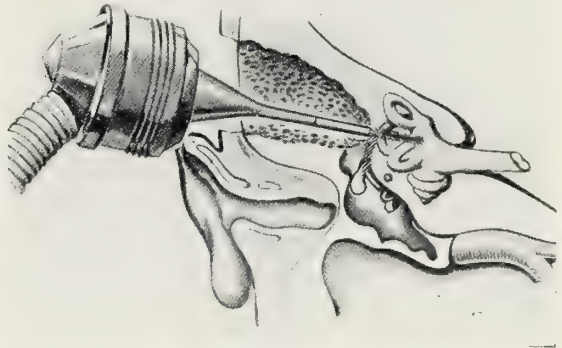


Figure 2. Ultrasonic emitter in contact with the vestibular labyrinth, avoiding the cochlea and facial nerve.

The tip of the emitter should be in direct contact with the bony labyrinth, as the presence of an intervening air space will reduce the ultrasonic dosage to the labyrinth. Hemostasis is essential, as blood around the tip of the emitter will increase the field of irradiation. The field of irradiation must be studied to avoid injury to the cochlear or facial nerve.

The nystagmus reactions are observed by an assistant during the administration of the ultrasonic waves, to determine the various stages of labyrinthine destruction. Nystagmus occurs within one to two minutes of ultrasonic irradiation. Initially, it is irritative in type—i.e., the fast component is directed toward the operated side. After 10 to 15 minutes of irradiation, nystagmus is reversed, with the fast component to the opposite side. Arslan referred to this as the para-

lytic stage. When applied to the vertical canals, a rotatory or vertical nystagmus is observed occasionally.

The dosage of ultrasonic irradiation cannot be predetermined accurately. It will vary with the time of onset of nystagmus and its subsequent course. Irradiation is begun at an intensity of 7-8 watts per sq. cm. and continued until the irritative nystagmus disappears. The intensity is then increased to 10-12 watts per sq. cm. until the paralytic nystagmus appears. The assistant also should observe any isolated contractions of the facial muscles and request the patient to contract these muscles.

The postoperative course is tranquil. It is usual for the patient to be sitting up comfortably on the first postoperative day. Nystagmus subsides within 24-48 hours. The occasional occurrence of modified attacks of vertigo during the first few weeks suggests progressive degeneration of the labyrinth.

Fifteen cases were operated on at the Chicago Wesley Memorial Hospital from May, 1957, to October, 1958. Attempts at medical management were exhausted before considering the use of ultrasound. Postoperatively, vertigo has been controlled in patients adequately irradiated with ultrasound. Tinnitus improved in several cases; in three, it was completely eliminated. The preoperative hearing level has been maintained in controlled cases.

Arslan believed that the therapeutic effect of ultrasound could be due either to the destruction of the neuroepithelium of the crista, or to control of the endolymphatic hydrops by relieving the hypersecretion or promoting the resorption of the endolymph. Altmann and Waltner

thought that the improvement in tinnitus could be due to improved endolymphatic circulation in the vestibular as well as in the cochlear portion of the labyrinth.¹¹

SUMMARY AND CONCLUSIONS

Animal experimentation and clinical experience have demonstrated that a selective destruction of the vestibular labyrinth can be achieved with ultrasonic waves. The attacks of paroxysmal vertigo cease and hearing is preserved in patients with Meniere's disease.

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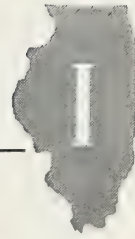
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CASE REPORTS



Non-Peregrinating Hysteria of Munchausen

RICHARD F. HERNDON, M.D., SPRINGFIELD

Physicians have been as entertained as instructed by sagas of the Munchausen syndrome.¹ The Baron's fellow travelers are migratory and so are recognized only as their manifestations become absurdly evident. Most of the patients described have been malingerers. If such behavior is hysterical, recognition is immeasurably complicated. A nonmigratory Munchausen hysteria in a small town provides easily available records and, as advancing years may bring real abnormalities, a careful reconstruction of the past brings today into focus.

Our community of physicians has been unsuccessfully engaged in the care of such a patient for 35 years. The following record is an aggregate of 116 hospital admissions with 33 attending physicians between 1923 and 1958. Since 1952 there have been 60 admissions under 13 physicians. (Table 1). The free intervals in the table may have been spent in other communities.

M. T. is a slightly obese, grey-haired white female. Her main complaint of headache, which was described as "all over" of a throbbing, pounding, or sharp character lasting from three to 10 days, usually four. They occur at about weekly intervals but with free periods of up to two weeks. They are not preceded by an aura and although occasionally accompanied by nausea, rarely is vomiting a problem. Any new medicine gives partial relief but each therapeutic trial fizzles

out and further medication is necessary. As a result, the patient has taken a wide variety of medicine, all essentially ineffectual.

Other than the chief complaint, the remainder of the history was difficult to obtain. With repeated interviews, sifting of old hospital records, personal interviews with old acquaintances of the patient, and a social history provided by the Public Aid Commission, the following story unfolded.

The patient, born in 1900, is the third of four children. Her mother died in the influenza epidemic in 1918 at age 37. Her father remarried in 1920 and died at age 65 of high blood pressure. Two older brothers died, each at 50; one of high blood pressure and the other of complications following appendectomy. Her younger sister is married to a physician and although the patient said her sister is nervous, she is ostensibly well. There were 4 stepsiblings in addition to the stepmother. These siblings are thought to be alive, but patient has had no contact with them in years. The stepmother is thought to be dead, but this too is conjectural.

After public education, the patient entered nurse's training and in her third year of training her stepmother reportedly threatened to take her younger full sister out of school to contribute to the support of the family. In a fit of depression over this, the patient says she took strychnine.

TABLE 1

Year	Number of Hospitalizations	Attending Physicians	Year	Number of Hospitalizations	Attending Physicians
1923	1)	Me	1941	1)	Kr
1924	1)	Ld	1942)	
1925	2) a	F,N	1943	1)	Hei
1926	2)	Ld	1944	12) c	Hei,Do
1927	5)	St,Le	1945	7)	Do,Ro
1928*	3	Patt,De	1946	7)	Sa,Ha
1929	1	Ls	1947		
1930			1948		
1931			1949		
1932	2)	Ma	1950	1) †	?
1933	1) b	Ma	1951	3)	Be,Ko
1934	1)	Da	1952	8)	Br,J,Kw
1935)		1953	12)	Kw,Gra,A,Gre
1936) State Mental Hospital		1954	9) d	Gra,Pe
1937	4	Sc	1955	11)	Pate,Bar
1938			1956	7)	Pate
1939			1957	5)	Bal
1940	1	C	1958	8)	Bal,Her

* First admission for drug intoxication.

a. Gynecology complaints.

b. Abdominal pain.

c. Chest pain.

d. Headache.

† Known admission to nearby community hospital.

nine. As a consequence she was denied further nurse's training "because of instability" and was accused of being with child. The latter was offered as an explanation for her attempted suicide. The patient vigorously denied that she was pregnant or had ever had sexual intercourse. Two acquaintances of the patient deny this portion of the history, stating that she left nurse's training to marry.

In 1923, shortly following release from nurse's training, the patient married, taking her full sister to live with her. Her husband worked for a local newspaper and had rheumatic valvulitis. He died of subacute bacterial endocarditis in 1945. He is described by the patient's acquaintances as a dead hero, a somewhat ineffectual man, entirely dominated by the patient when alive, then put on a pedestal after death. He must have been disgusted occasionally, however, for he had her committed to a state mental hospital and while she was there, he purchased a new car against her wishes. The patient was pregnant on two recorded occasions, but aborted.

Her first known local hospital admission was in 1923; by 1928 she had had two pelvic surgical procedures resulting in complete hysterectomy, bilateral salpingectomy, and removal of left ova-

ry. Her symptoms in this era were dominated by abdominal pain, but following a cholecystectomy in 1934 her complaints have been of chest pain and headache. The headache is described above. The chest pain is sharp and stabbing in character, precordial, not substernal in location, located just beneath the left breast, lasting from four to 12 hours. It is not often exertional and not necessarily associated with cyanosis in that the patient has been deeply cyanotic without pain.

Cyanosis has been noted since about 1944 when a diagnosis of heart disease was first entertained. Cyanosis is intermittent, lasting from 12 to 36 hours and is spectacular when accompanied by a blood pressure of 200/100, dyspnea, and chest pain. This has been demonstrated to be due to methemoglobinemia, but the sensitizing agent is as yet undetected. Some local physicians and one acquaintance insist that the patient can willfully induce cyanosis without medication.

The patient has been on relief intermittently since 1940. In 1953 she was put on the rolls of the Illinois Public Aid Commission as totally disabled due to coronary sclerosis. Up until that time she had worked intermittently as a practical nurse. In 1954 or 1955 she was studied intensively at the Research Hospital at Univer-

sity of Illinois with a final diagnosis of psychoneurosis.

Many hospital admissions have been precipitated by disturbances, usually the result of intoxication with some sedative, involving neighbors or police. These admissions she in turn blames on the interfering parties.

The patient has never been observed to express outright hostility to physicians, nurses, or hospitals. She has verbalized feelings of persecution toward Public Aid workers—the current welfare organization supporting her, but to her attending physician she continually apologizes for “being so much trouble.” On one recent occasion, when hospitalized because of an overindulgence in sedatives, (she was found in her nightgown in the street by a passing motorist) she was in a bed with side rails and was observed to beat her head against the top rail—stopping every now and then to cry out plaintively “don’t hit me, don’t hit me.”

PHYSICAL EXAMINATION

This obese, white-haired, pleasant, somewhat placid, white female with a good vocabulary, has a soft self-deprecating voice, apologetic in tone, without manifest anxiety. Blood pressure runs from 120/70 to 200/100. Pulse is regular. The lips, nail-beds, and mucous membranes may be blue-grey cyanotic, but otherwise examination is entirely within normal limits except for ataxia if oversedated and scars of abdominal operations.

Laboratory work has always been within normal limits except for a leucopenia and anemia coincident with thiocyanate therapy; the leucopenia was transient, disappearing on withdrawal of medication but slight anemia, (Hb. 11.0 gm.%) has persisted.

The patient has had many, many diagnostic studies. Urine for 17-ketosteroids was slightly elevated (25 mg./24 hr.) on one of three specimens but no other abnormality was discovered. X-rays of the skull, chest, cervical and thoracic spine, stomach, colon, pyelography, and even presacral air insufflation have been normal over the years. Innumerable EKGs have been normal or at best borderline, with non-specific T wave changes. The only definitely abnormal laboratory finding has been the regular association of methemoglobinemia with cyanosis.

DISCUSSION

This patient has exhausted the patience and ingenuity of 33 local physicians. She demands an astounding amount of care. All practitioners are acquainted with such patients, differing only in degree and duration of symptoms. The persistence of this woman is appalling as is the inability of the medical profession to deal with her. Her tactics are like loopholes in the law that result in lengthy, disagreeable, unrewarding litigation.

The patient has most effective measures to obtain attention—the poor, dependent supplicant pleading for the services of a Samaritan. These tactics are devoid of any semblance of hostility, but latent hostility is assuredly present. She is like a fawning Uriah Heep whose deference nauseates. A favorite practice is to apologize for her own inability to relieve her symptoms, a fault supposedly of the physicians but which she assumes. She is “so sorry to impose”, she wishes she “did not have to bother,” and before long one feels as if one had been bludgeoned with a ball bat.

Superficially her trouble is thought to be due to hostility to medicine and doctors. She claims a reason to be hostile—that the profession denied her a prestige position by way of a nursing career. As it is not socially acceptable to damn all physicians, in retaliation she has irremediable symptoms, confounding medical science, refusing to be cured, and yet simultaneously pleading for salvation. What better way to make fools of doctors?

This patient has possible value: since she probably is not unique, a recitation of her chronicle may provide some denominator of recognition. Institutional care would be the solution for those legally confinable. This particular patient would be difficult or impossible to commit; the community will probably have to continue to support her expensive, time-consuming medical attention.

800 South Fifth Street.

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Clinical-Surgical Conferences



Perforated Peptic Ulcer

**Department of Surgery
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Moderator:

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Discussants:

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Dr. Robert J. Freeark: Today we are departing a little from our usual conference in that we will discuss a single case, a rather unusual and interesting one which actually is several cases in one. The patient to be presented experienced three separate and distinct acute episodes, any one of which presented problems worthy of considerable discussion.

Perforated peptic ulcers are treated at Cook County Hospital largely by the senior surgical residents. These cases usually are emergencies and have a striking tendency to arrive at the admitting room at night or over a week-end. The

practices that have evolved in the surgical and nonsurgical management of perforated peptic ulcer have been more or less passed down over the years from one resident group to the next. It is wise to review our practices periodically and to inquire into the advisability of some of them. The discussants today are well qualified to help us do this. Dr. William Requarth is an acknowledged authority on the acute surgical abdomen. His writings on this subject reflect the years of training and experience gained at this hospital during his surgical residency. We are proud to call him an alumnus and we want to find out if his thinking and practices have changed significantly in the years since he left County Hospital.

Dr. Morris T. Friedell is an esteemed member of our surgical attending staff. He received his early surgical training at the Mayo Clinic, and knows the peptic ulcer problem from the standpoint of the private institution, the large charity hospital, and the busy general surgeon in private practice.

The clinical data will be presented by Dr. James Bransfield who, as you will soon appreciate, devoted considerable time and effort to this man's care.

CLINICAL DATA

Dr. James Bransfield (surgical resident): This

54 year old negro male entered Cook County Hospital on February 25, 1958, with a 12 hour history of sudden, severe, epigastric pain. Shortly after its onset, he vomited and felt weak but was able to walk to the bathroom, where he noted passage of black tarry stools. Pain rapidly became generalized throughout the abdomen and increased in severity. He was admitted to this hospital as an acute abdominal emergency in considerable distress.

On questioning, it was learned that this man had had a one month period of ulcer-type symptoms preceding this episode. He also admitted to excess indulgence in alcohol and tobacco. He had received no medical therapy for ulcer. It was further learned that hypertension had been present "for years" and had been treated irregularly with oral medication of unknown nature. In addition, the patient had complained of cough and sore throat for the past three or four months. Perusal of old Cook County Hospital records revealed that this man had been hospitalized some years earlier for an episode of hypertensive encephalopathy.

Physical examination disclosed a fairly well nourished, well developed negro male who complained of acute abdominal distress even while lying still and flat in bed. His blood pressure was 180/120 mm. Hg., pulse rate 120, respiratory rate 30 per minute, and temperature 101° F. rectally. There were hypertensive findings in the retina and mild cardiac enlargement. The remainder of significant abnormalities were noted in examination of the abdomen which revealed boardlike rigidity, rebound tenderness over all quadrants, no audible bowel sounds in five minutes of auscultation. Small bilateral inguinal hernias were easily reducible, and no organs or masses were palpable.

Laboratory data were as follows: Stool benzidine + + + +. Urinalysis showed specific gravity 1.014 with albuminuria +, casts, and occasional white blood cells. Hematocrit was 49 per cent. Four roentgenograms of the abdomen and chest revealed the presence of free air beneath the diaphragm.

Shortly after admission the patient was taken to the operating room where, 14 hours after onset of pain, he underwent laparotomy through a right paramedian incision under general anesthesia. A perforated ulcer was found on the anterior wall of the duodenum, with minimal peri-

toneal soilage. The abdominal cavity was aspirated carefully and, after repair of the duodenum, the incision was closed in layers without drainage. The patient was placed on penicillin with continuous nasogastric suction instituted through a Levine tube. In addition to intravenous fluids containing multivitamin supplements, the semi-sitting position was encouraged once vital signs became stable in an effort to minimize subdiaphragmatic fluid collections.

The postoperative course was marked by copious tracheobronchial secretions, chills, fever, and evidence of pneumonitis. By the third postoperative day, progress seemed satisfactory. The patient had active bowel sounds and expelled flatus. The nasogastric tube was removed and a clear liquid diet was instituted. Roentgenograms revealed basilar atelectasis and residual free peritoneal air. On the fourth postoperative day, he experienced two episodes of watery coffee-ground emesis for which the Levine tube was reinserted and promptly returned 3,000 cc. of brownish, watery fluid in the next 16 hours. On the fifth postoperative day he was afebrile, hungry, and tolerated clear liquids with the nasogastric tube clamped. By the ninth day he was on full Sippy management, ambulatory, and had no complaints.

On the 12th postoperative day the patient vomited his breakfast, complained of sudden, severe, epigastric pain extending to the left shoulder. He presented the picture of an abdominal catastrophe with shock, profuse sweating, and boardlike abdominal rigidity. Roentgenograms of the abdomen disclosed free air beneath both diaphragms. The patient was taken to the operating room in a state of semi-shock approximately four hours after the onset of pain.

DISCUSSION

Dr. Freeark: Let's stop at this point and see what sort of advice we can obtain. In summary, we have a poor risk patient with a perforated peptic ulcer, handled in routine operative fashion, who experiences a second abdominal catastrophe just about the time he is ready for discharge. Dr. Requarth, what went wrong and what should we do about it?

Dr. William Requarth: Basically you might call this a typical Cook County Hospital case. The patient came in with a perforated peptic ulcer that had occurred more than 12 hours previously. He was not in the best physical condi-

tion. He had hypertension and, judging from his postoperative course, a pre-existing chronic respiratory infection. The management conformed strictly to established principles. Regardless of how long the perforation has existed, if it is still open it should be closed surgically unless the patient is in extremely poor condition. In the circumstances, you might be tempted to rely solely on nasogastric suction, but the aspiration treatment of perforated peptic ulcer seldom is indicated. Actually, the only indications for nonoperative treatment are a patient in very poor condition or when doubt exists about the diagnosis. X-ray study of this patient showed free air beneath the diaphragm. Dr. Roger Vaughan, night surgeon at this hospital for many years, used to point out that differentiating between free intraabdominal air and gastric air bubble is not easy. If there is an air pocket beneath the left hemidiaphragm, you don't know whether it is free air or a gastric air bubble. He used the rule that the thickness of the diaphragm is about $\frac{1}{4}$ inch and if it appears more than that, it probably includes the wall of the stomach and represents a gastric air bubble and not free air. My own feeling is that a roentgenogram, taken in the left lateral decubitus position, is a better way to demonstrate air.

This man had simple operative closure of the perforation. On the 12th postoperative day he showed evidence of recurrence of perforation. Simple closure of a perforated peptic ulcer can be done without requiring an expert abdominal surgeon. In most cases the mortality rate is around 1 or 2 per cent. This man was operated upon 14 hours after perforation so you would expect the mortality in this type of case to be higher.

The question might arise whether this patient should have had gastrectomy at the time of his initial perforation. I am opposed to primary gastrectomy, even though here it looks as if the ulcer had re-perforated. To justify primary gastric resection for ruptured ulcer you must meet certain conditions: the patient should be under 50 years of age and in good general health and he should have more than just a plain perforation as an indication. If he has perforation with hemorrhage or with gastric ulcer, or re-perforation of an ulcer, or perforation with carcinoma — any one of those might be an indication for

primary gastrectomy. In this case, indications for primary gastrectomy did not exist.

I want to say one thing to the residents at this hospital. When you finish your work here at the Cook County Hospital and go out into practice, you will have an experience and acquaintance with the acute surgical abdomen that is available to few of your contemporaries. You must realize that closure of a duodenal ulcer that has perforated is a lifesaving procedure. Gastrectomy is advocated not only to close the perforation but as a form of definitive treatment. But before you decide on that procedure, think it over carefully. Remember that following gastrectomy three to five per cent of patients have recurrent ulcers and another 10 per cent do not do well. Many patients with ruptured ulcer are quite young, and I don't think many gastric surgeons would agree that gastrectomy should be done on young people. If the result is not good, these patients have a long time to live with their bad one. Out in practice, it is your primary responsibility to save the patient's life, and sealing the perforation in a perforated peptic ulcer by simple operative closure accomplishes that very well.

As to the problem presented by this patient on the 12th postoperative day, I would say the patient has re-perforated. The presence of free air is not significant because he had had recent laparotomy. He had pulmonary complications the first few days after surgery and did well until suddenly the same symptoms came back: pain in the abdomen extending up under the shoulder, boardlike rigidity of the abdomen, and sweating. It is not so much a question of diagnosis here as whether this man needed and could tolerate another operation. Many times, where you cannot be certain of the diagnosis, you must make the correct decision as to whether operation should be done. I would say here the patient needed to be re-operated. I would presume he had a re-perforation.

Dr. Freeark: Assuming that we find a re-perforation in this 55 year old man who was in shock when taken to the operating room, should we retamponade the perforation or what?

Dr. Requarth: My feeling would be that the patient should have a second closure. Although re-perforation is an indication for gastrectomy, I do not think this patient would tolerate and live through a major surgical procedure to cure ulcer. Even if you tell me he has had a resection

and survived, it would not change my opinion. He may have survived in spite of it, but I still feel that primary gastrectomy should not be done. This perforation was first closed after a 14 hour lapse of time with a stormy postoperative course and perforation recurred. I would rather put my reliance on second closure.

Dr. Freeark: I wonder how Dr. Friedell feels about this management.

Dr. Morris T. Friedell: I would agree with Dr. Requarth in general. There are several points in this case that are important. The first is that the patient had a known ulcer history for one month, so this is not entirely an acute ulcer. Second, he had a history of hemorrhage a short time prior to perforation which adds bleeding as a combined factor. One of the principles of the surgical treatment of bleeding duodenal ulcer is to resect the ulcer or otherwise control the hemorrhage. Here, an ulcer progressed for one month and was active enough to eat through the anterior duodenal wall. At the same time, it produced a minor hemorrhage because there was no change in the hematocrit, although he was probably in a state of hemoconcentration. That brings up a third point: adequate preliminary hydration may not have been obtained. Fourth, the problem of a bleeding ulcer was not considered because anterior perforation almost never causes bleeding. Major hemorrhage associated with anterior duodenal perforation is not common but the possibility of an associated or second ulcer that is causing bleeding must be eliminated. That was not assumed in this case.

When a duodenal ulcer is to be closed, or when undertaking resection, there is the matter of curing the patient and also confirming the impression that that ulcer alone is the one causing the bleeding. In this case, perhaps the duodenum should have been opened and examined, as we do generally for bleeding ulcer. This means that you are almost committed to do a more definitive type of operation than simple closure when there is hemorrhage associated with a perforated duodenal ulcer. This would mean gastric resection, pyloroplasty with vagotomy, or suture of the ulcer after duodenostomy.

In this case, in addition to the classical findings of a perforated duodenal ulcer, there is bleeding and a history of a semi-chronic condition. We have no right to assume that the symptoms that persisted for a month prior to opera-

tion were due to the ulcer that perforated. He could have had one ulcer which bled and perforated, or he could have had two ulcers.

I might point out that, in spite of adequate suturing, this patient continued to show evidence of hemorrhage from the upper gastrointestinal tract as evidenced by coffee-ground emesis on two occasions postoperatively.

Dr. Freeark: There was an element of obstruction and hemorrhage in his immediate postoperative state. After one week it was felt that obstruction had been relieved and there was no further evidence of bleeding. May I ask if the discussants are in agreement with the routine type of closure we are using? Generally three silk sutures are passed through the anterior duodenal wall on one side of the ulcer and out the opposite side. They are then tied over a patch of omentum. Is this your practice and do you use a free omental graft?

Dr. Requarth: I use the same procedure. After all, I was trained here.

Dr. Friedell: I would prefer a pedicle or attached omental graft.

Dr. Freeark: Do both of you use silk in the closure? (Yes) What about vagotomy at the time of re-perforation if the patient cannot tolerate more than that?

Dr. Requarth: My feeling is not changed. I think the second operation should be simple. I would not want to dig up under the diaphragm in a patient so dangerously ill.

Dr. Freeark: We undertook gastric resection in this patient with an acute re-perforation. I was present at the time of surgery. Whether the omental graft had been displaced or whether continued erosion of the duodenal wall had occurred we do not know, but the perforation was in the area of the former sutures. The hole was much larger now and you could look directly through to the posterior duodenal wall. The structures in the area of the pylorus could not be identified, so the exact location pre- or post-pyloric was difficult to establish. The patient had approximately 3,000 cc. of "dishwater" fluid in the abdomen about four hours after his perforation. His blood pressure was maintained during the early part of the operation by means of Levophed®, and he was subjected to an operative procedure that lasted three hours. He had a subtotal gastric resection of 80 per cent of his stomach. The marked inflammatory reaction in

the region of the pylorus necessitated insertion of a catheter into the duodenum. This was led out through a separate incision in the abdominal wall. The abdomen was carefully irrigated and lavaged with warm saline solution to minimize the chemical irritation. There was no evidence of abscess in the abdomen nor of posterior ulcer, although, that was difficult to exclude entirely because of the status of the entire duodenum.

The patient's postoperative course was stormy. Blood pressure and pulse rate, however, returned to normal levels shortly after the procedure was completed and Levophed could be discontinued. It appeared that removal of the gross peritoneal contamination did a great deal to restore his circulatory efficiency, but he continued to have trouble of a pulmonary nature. The duodenal catheter was the source of excessive loss of fluids which could not be measured because much came out through and around the tube. By dint of much effort, the electrolytes were kept in balance. There was digestion of the skin of the abdominal wall around the site of the duodenal catheter exit. However, after about five days, satisfactory progress was apparent. The patient was afebrile, he could take nourishment by mouth, and seemed to be doing well generally, with the exception of electrolyte loss. There was no evidence of afferent loop obstruction as bile was obtained from the stomach pouch through a Levine tube. We felt the excessive drainage from the catheter duodenostomy was related to the use of suction apparatus. The catheter was removed on the eighth postoperative day. The patient continued to discharge considerable fluid from the fistulous tract that had resulted, but in general his course was one of slow but definite improvement. However, on about the 16th postoperative day, following a liquid breakfast, the patient experienced sudden agonizing abdominal pain that rapidly became generalized. He went into profound shock and did not survive any further attempt to control his ulcer diathesis.

Dr. Friedell: We are dealing here with a complicated ulcer. It must be a severe disease that eats a hole in the duodenal wall before the individual knows he has ulcer. What happens after closure of such an ulcer? Ten years ago it was felt that cure was obtained by simple closure, but when we reviewed our cases we found that 40 per cent were back in the operating rooms by the end of five years, and at least 70 per cent

had more trouble; 2 per cent re-perforated every year, and one to two per cent bled. Obstruction and intractability, which are additional indications for surgery, begin to develop as the condition goes along. This is not only an acute diathesis but also is the beginning of later difficulty. My feeling now is that in these patients with previous perforations, a high resection is advisable or vagotomy plus some drainage operation.

This man could not be protected against recurrence because he had a progressive ulcer diathesis. It was sutured once but it ate all around that suturing. When the surgeons got to it 12 days later, the ulcer was huge and they undertook definitive surgery. I will not say that they should not have done resection at that time because I think it should have been done if it was technically feasible. We must not confuse what the surgeon can do with what should be done if it can be accomplished. The duodenum could not be closed, so a catheter was sutured into the lumen which often is a satisfactory out. I don't know that they did as high a resection as they would have liked to if the patient had been in good shape.

We are told that this man was taken to the operating room in shock. The fact that he had a hole in his duodenal wall does not mean that we have to rush him to the operating room and put stitches in it right away. We must follow the fundamental principles of the management of shock. To take a patient to surgery in shock because he has a perforated ulcer is not always the best procedure. His electrolytes and plasma volume must be restored. Don't forget that people do recover from perforation by conservative management. If you cannot get the patient in some shape for operation, you should not do the operation. This patient came up in a precarious condition. We realize we are dealing here with a complicated problem, but certain things must be done: The control of shock and the maintenance of nutrition and electrolytes must go on whether you operate or not.

At surgery, in this case, not all of the acid secreting part of his stomach was removed so there is no reason why this man could not develop a new ulcer at the gastrojejunal stoma and there is no reason why he could not perforate again, which he probably did.

There may be other things to do in such a case

before subjecting the patient to prolonged and complicated surgery. A tube jejunostomy, for instance. That is an old stand-by when perforations of the duodenum cannot be closed well. Omentum is put in the hole, and a tube is put into the jejunum to tide the patient over the acute phase. If jejunostomy had been done here, all the duodenal juices could have been fed back into the jejunum, and that might be better than trying to keep the electrolytes in balance solely by parenteral fluids.

We should not feel entirely bad about the results in this case because we have a 10 per cent mortality from perforated duodenal ulcer and a 15 per cent mortality rate from bleeding ulcer in this age group, and these two mortality rates do not help each other.

Dr. Requarth: Dr. Friedell has made some excellent suggestions. I was interested to hear him say he would have been in favor of gastrectomy. One cannot make a decision on that standing here. It is a matter of judgment. When you are in doubt it is always better judgment to pull back and do the least than can be done and still give the patient a chance at survival. Gastrectomy usually is a difficult procedure. I can visualize the situation here with exudate from the previous operation and the patient in poor condition. The decision must have been difficult. Catheter duodenostomy frequently is done in situations such as this when gastric resection is undertaken. A urethral catheter is sewed into the duodenal stump as a safety valve to protect an insecure closure. Failure of the duodenum to heal is a lethal complication.

Remember that your primary duty is to save the patient's life. Simple closure of a perforation does not require an experienced abdominal surgeon or a great number of facilities, and it usually suffices.

Dr. Freeark: What causes shock in perforated peptic ulcer? It developed suddenly in this patient and corrected itself with the addition of blood transfusions by the end of the operative procedure. Can we make a point of getting the chemical irritants out as soon as possible?

Dr. Friedell: We always hear someone say: "As soon as I got the abdomen opened and sucked out all the stuff the patient's blood pressure came up to normal." I don't believe we should confuse prostration with shock. It is true, a patient with perforation will have prostration.

The blood pressure may fall temporarily but that condition does not last long. If the peritoneal fluid becomes infected, the blood pressure will go down again but that is due to a different phenomenon: septicemia or hypovolemia, with rapid outpouring of fluid into the peritoneal cavity and inability to replace it. The surgeons in Los Angeles have adopted a policy of giving these people large amounts of plasma. I think the point they make is good that unless they can get the blood pressure up before operation, they are quite likely to fail during surgery. We have revaluated our statistics on how well we do with these people who are in shock when we operated, and we found we have done badly. I think shock usually is due to diminution of blood volume rather than infection.

Dr. Harold B. Haley (Associate Attending Surgeon, Cook County Hospital): This is a patient who has had three episodes of ulcers in a six weeks period. I must be currently fashionable and ask if he had a pancreatic tumor.

Dr. Freeark: That is a good question and a report of the postmortem findings will be given shortly. There also has been a question about the albuminuria of 1+, possible hypoproteinemia, and delayed healing on that basis. Serum protein studies were done during the initial postoperative course and they were somewhat reduced in content. I am not sure that these measurements are significant because the volume of the vascular compartment was quite variable. Hypoproteinemia was a great problem after gastric resection and the patient's total proteins dropped below 5 gm., in spite of considerable quantities of blood and plasma.

Question: Do you usually biopsy these ulcer beds before they are closed?

Dr. Friedell: I try to find the pylorus and decide whether it is a gastric or a duodenal ulcer. I am not always successful and if I am not sure where the pylorus is, I will biopsy the ulcer. I think all perforated gastric ulcers should be biopsied.

Dr. Samuel Hyman (attending staff, Department of Medicine): Dr. Friedell brought up the problem of bleeding. I do not think we have paid enough attention to the associated finding of bleeding with perforation. It is a common belief that a perforated ulcer does not bleed, but that is not so. Not only may the anterior perforation cause some bleeding, but other ulcers may be

present. An additional consideration here is whether the patient may have had another underlying problem to account for some of his trouble. He is known to have had hypertension. Did he also have uremia associated with perforation? If he did, that may account for some of the gastrointestinal bleeding. He may have had a collagen disease, such as periarteritis nodosa or similar vasculitis, to account for the acute ulcer. We should think about those things lest the pathologist surprise us.

Dr. Freeark: There was at times elevation of the NPN in association with the electrolyte disturbance. He concentrated his urine to 1.018, and 1+ was the highest report of albuminuria. Dr. Requarth, do perforated ulcers bleed frequently or not at all?

Dr. Requarth: They do not bleed frequently. That is because most perforations are anterior. Perforations posterior into the pancreas are manifested by hemorrhage. From my own experience it is not a common finding. This patient bled but the amount was not great.

Dr. Louis River (Surgical Attending Staff, Cook County Hospital): This has been a very informative conference on an extremely interesting case. This man had not only duodenal ulcers but severe nutritional deficits, cardiorespiratory disease, and limited renal reserve. The case represents a good day to day analysis of the problem of handling such a patient, but I think the outcome was evident from the first. If he had had a resection at the time of the original perforation, he would have blown out his duodenal stump.

In closing perforations I have used tags of omentum to cover the defect, but occasionally there is no tag available and then I have used the upper end of the falciform ligament. As for

closing the hole, many of them are deep and there are recent adhesions around. We can locate the hole and see it but to get a good "bite" of the duodenal wall is difficult. In such a case if you take a 00 catgut on a good sized needle and pass it first through the perforation and out the distal margin of the hole, then re-thread the needle and pass it back into the hole and out the proximal wall, leakage can be controlled with one stitch.

I would like to say something about the use of a catheter for duodenal stump drainage. I have used a small Pezzar catheter fastened in with loose purse string sutures and hooked up to a 250 cc. plastic bag taped on the anterior chest wall. The loss into that bottle will run about 2,000 cc. in a week, whereas the loss drained by catheter attached to suction apparatus will run as high as 4,000 and 5,000 cc. a day.

Dr. Freeark: Autopsy of this patient revealed the following: Old posterior myocardial infarction; extensive bronchopneumonia, chiefly in the left upper lobe and right base; nephrosclerosis; small subdiaphragmatic abscess. There was a perforation of an anterior marginal ulcer in the region of the anastomosis. Considerable redness and injection of the jejunal mucosa in this area suggested ulceration rather than a dehiscence of the suture line in that area. There was no tumor in the pancreas.

I want to thank Dr. Requarth and Dr. Friedell for their excellent discussions. It is heartening to hear that people like Dr. Requarth, who trained in this institution, are still for the most part adhering to the practices that he and others before and after him have helped to establish and perfect. We are indebted to you both for a lucid discussion.

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Radioactive iodine in goiter

The administration of radioactive iodine [I^{131}] is an effective form of definitive treatment for toxic diffuse or exophthalmic goiter and is the treatment of choice in most instances. In toxic nodular goiter, surgery is much more satisfactory, and is preferable in all except the few patients in which the surgical risk is prohibitive.

Radioactive iodine given in exophthalmic goiter will destroy the gland as certainly and as completely as operation. This being the situation, it would seem foolish to subject a patient to surgery if a drink of water containing I^{131} will do the same thing.

The objections to I^{131} treatment, for all practical purposes, are two: (1) the radiation involved might affect the genes; (2) it might induce cancer of the thyroid later in life. The first objection has little merit. The amount of radiation to the gonads is, at most, a half-dozen roentgens — about the same amount involved in a series of roentgenograms of the spine and pelvis. The carcinogenic danger, although hypothetical missed entirely. There is fairly good evidence to indicate that radiation to the neck in infancy tends to cause malignancy of the thyroid. There is no such evidence in adults, however, and the danger must be small since up to the present mo-

ment, I^{131} therapy has not produced cancer of the thyroid. Indeed, it would be reasonable to assume that the incidence, if any, will be less than the surgical mortality.

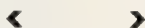
Since the choice of age 40 as the dividing line between treatment by surgery and by I^{131} is not based on factual evidence, many physicians feel justified in treating patients with I^{131} down to age 20, few in the teen ages, and none in children. The use of I^{131} is contraindicated in children and in pregnancy. All other contraindications are relative and hypothetical. Therapy with this substance has a disagreeable tendency to lead to hypothyroidism, both early and late, but there is little likelihood of recurrence of the disease. The reverse is true of surgery.

Occasionally, an elderly patient with a toxic nodular goiter is so ill or has such serious concomitant disease, that operation carries an unusually high risk. Such a patient can be treated with I^{131} , provided the gland will accumulate it in sufficient quantities. Occasionally it will not. This situation usually follows prolonged administration of Lugol's solution. The nodular goiter, saturated with iodine, does not eliminate iodine as does a diffusely hyperplastic gland. Thus, if treatment with I^{131} ever is contemplated in a patient with toxic nodular goiter, do not give him iodine at any time.

Thyroid stimulating hormone (TSH) is of considerable help in treating this type of patient. When uptake is low, TSH may raise it to a level

permitting I¹³¹ therapy, or may greatly enhance its effectiveness. It has made many patients amenable to treatment that heretofore were not. Large and repeated doses are needed to treat toxic nodular goiter, complete cure is difficult to obtain, and hypothyroidism is uncommon.

Lindon Seed, M.D.



A service of the heart

We live in a world of change which sees old ideas, old certainties, and old ways of life challenged by the upsurge of new concepts and new discoveries. It is in this world that the individual physician and our medical societies can play an increasingly important role. The plan recently approved by the Illinois State Medical Society to provide the aged with medical care at a cost they can afford is a service of the heart.

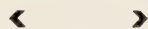
It proves again, if proof be needed, that medicine is a ministerial profession, wherein the desire to be helpful is basic. Every good physician lives by this rule. He is intuitively sensitive to his patient's emotional as well as to his bodily needs. The good physician is an honest man, who thinks clearly, who possesses stability, and who can give to the aged under his care not only the needed medication but above all sympathy, courage, and confidence. He knows that illness and fear go hand in hand and his gentleness, tact, truthfulness, strength, and warmth help relieve fear which often is harder to endure than pain.

No one is better equipped to care for the 14 to 15 million of our elderly citizens than the family doctor. He is the best geriatrician, for he does not have too much zeal for the new nor contempt for what is old. Notable discoveries and public acclaim are not likely to be his lot, but the immense satisfaction he so often experiences when he views the face of a grateful patient cannot be measured in a test tube. It far outweighs all monetary compensations. For what greater compensation can a person expect than the satisfaction of knowing that you are helping those who cannot help themselves and who need you and depend on you in their tribulations.

This is what makes the practice of medicine a noble profession that satisfies the soul with the knowledge that we are here to add what we can and not to get what we can from life. For ours is a service not only of the mind, not only of

medical know-how, but above all a service of the heart.

Samuel J. Zakon, M.D.



Cutting medical costs

The high cost of medical care remains a subject of lively interest. The profession's PR staffs attempt to justify mounting costs by pointing out that in our inflationary era medical costs have not risen as high proportionately as other services and products. They also point out that while our modern remedies are costly, they have a more specific action and reduce the period of hospitalization and disability. This argument falls on deaf ears when insurance pays the bills and the pay check continues despite disability and illness. In fact, some persons now make more money when sick than when well, and in this respect there is no monetary advantage to getting well faster.

Be that as it may, the cost of medical care can be reduced even though the physician's fees remain stationary. This project should be given top priority, because it represents one of the most common complaints against our profession. If we don't do something about it, our government may take the initiative.

Every physician can think up ten ways to bring down expenses. For example, many illnesses can be treated as easily and as well at home as in the hospital. House calls are not popular today, but consider how efficacious our modern remedies are with the patient in bed at home. The medico objects to the time spent traveling back and forth whereas the patient takes the attitude, "Why stay at home when I have hospital insurance to pay the bills." The subscriber is shortsighted, not realizing that he and his fellow members are paying the premiums. These are the same people who complain of the high cost of medical care.

Minor surgery is another illustration. It is an expensive procedure because the operating room costs the same per half hour whether a mole or the gall bladder is removed. Two or three nurses stand by, and the equipment such as the sterilized operative kit and the anesthetic tray are available.

A surgeon was asked about this situation and his answer was the well known refrain, "There's no need to worry. Blue Cross will pay the bill."

But again, who pays Blue Cross? Twenty years ago minor surgery was considered an office procedure. This is not a plea to go back to the old days but it is a plea to meet new problems with new methods. The least we could do is equip a special hospital room for minor and less expensive surgery.

The patient in the hospital for observation or for an executive examination gets the same expensive care as the person with pneumonia or renal colic. Money could be saved by offering other types of accommodation to patients who do not need the full facilities of the hospital. This is known as progressive care and represents a step in the direction of the more economical use of hospital resources. The system includes five different phases of care: Intensive care for the acutely ill, intermediate care for the average patient, self-care, long term care, and home care.

Let's pause in our research, evaluate our gains, and streamline the practice of medicine. Other fields of endeavor are doing big things along this line. Why should the medical profession become obsolescent? We should make as much progress in our economic laboratories as we have in our medical laboratories.

Dr. Joseph T. O'Neill installed ISMS president

Dr. Joseph T. O'Neill, pediatrician of Ottawa, Ill., is the new president of the Illinois State Medical Society. Dr. O'Neill was installed at the closing session of the last annual meeting, succeeding Dr. Raleigh C. Oldfield of Oak Park.

Long an ardent worker in the Council and committees of the ISMS and always displaying a keen interest in the economic side of medicine, Dr. O'Neill is well qualified to assume the leadership of the Society. He has served on the Council since 1948, being its chairman in 1955 and 1956. He was one of the original members of the Committee on Maternal Welfare when it was formed 25 years ago.

Dr. O'Neill began the practice of medicine in 1916 but because of his interest in children, he took postgraduate courses in pediatrics in Europe, and in 1927 began the practice of that specialty in Ottawa. He has been in that field there ever since.

Having approached his specialty through gen-

eral practice, Dr. O'Neill knows the problems of the GP as well as those of specialists.

Dr. H. Close Hesseltine chosen president-elect

Dr. H. Close Hesseltine, Mary Campau Ryerson professor of obstetrics and gynecology at the University of Chicago School of Medicine, has been chosen president-elect of the Illinois State Medical Society.

Dr. Hesseltine was born in Wayne County, Iowa, in 1901, and is a graduate of the University of Iowa College of Medicine, class of 1925. He served his internship and his residency in obstetrics and gynecology at the University Hospital, Iowa City.

He taught at the State University of Iowa before coming to the University of Chicago in 1931. He also is attending obstetrician and gynecologist at the Chicago Lying-In Hospital.

Dr. Hesseltine is a researcher in puerperal fever and other genital tract infections besides being a clinician and teacher. He has contributed numerous articles to national medical journals.

He has been active in the Chicago Medical Society and the ISMS for many years, and is a past chairman of the ISMS Council. He also is a trustee of the Illinois Medical Service, a member of numerous specialty organizations, vice chairman of the AMA Section on Obstetrics and Gynecology, and a representative of the AMA to the Joint Committee of the AMA-AHA Medicolegal Education Committee.

Illinois State Medical Society elects officers

The Illinois State Medical Society at the 119th annual meeting elected the following officers:

President-elect—Dr. H. Close Hesseltine, Chicago; first vice president, Dr. Lee N. Hamm, Lincoln; second vice president, Dr. Allison L. Burdick, Chicago; secretary-treasurer, Dr. Harold M. Camp, Monmouth.

Chairman of Council—Dr. Burtis E. Montgomery, Harrisburg; members of Council, Drs. Carl E. Clark, Sycamore; Ralph N. Redmond, Sterling; Bernard J. Klein, Joliet; William E. Adams, Caesar Portes, and Edward A. Piszczek, Chicago.

Delegates to the AMA—Drs. Arthur F. Good-



Joseph T. O'Neill, M.D.
President, Illinois State Medical Society
1959-1960

year, Decatur; Harlan English, Danville; Joseph T. O'Neill, Ottawa; H. Kenneth Scatliff, Walter C. Bornemeier, Leo P. A. Sweeney, and Frank H. Fowler, Chicago.

Alternate delegates to AMA—Drs. Edward Cannady, East St. Louis; Jacob E. Reisch, Springfield; Norman L. Sheehe, Rockford; Eugene T. McEnery, George C. Turner, Allison L. Burdick, and Edward A. Piszczek, Chicago.

The following committee elections also took place:

Medico-Legal—Drs. Ralph McReynolds, Quincy; Edward C. Helfers, Chicago.

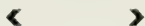
Medical Education and Hospitals—Drs. Kenneth C. Johnson (chairman) and George F. O'Brien, Chicago; Ward Eastman, Peoria.

Medical Benevolence—Dr. Irving H. Neece, Decatur.

Medical Testimony—Drs. Maurice D. Murfin, Decatur; John H. Gilmore, Chicago.

Prepayment Plans and Organization—Drs. Harry Mantz, Alton; Maurice M. Hoeltgen and E. Lee Strohl, Chicago.

Grievance—Drs. Harry Mantz, Alton; James E. Wheeler, Belleville.



Dr. Louis M. Orr new president of AMA

Dr. Louis McDonald Orr, 59, Orlando (Fla.) urologist, was inaugurated as the 113th president of the AMA, succeeding Dr. Gunnar Gunderson of LaCrosse, Wis.

Dr. Orr had a long and distinguished career with the AMA before he was elected president. He served as vice speaker of the House of Delegates, chairman of the Federal Medical Services Committee, ex-officio member of the Council on Constitution and By-Laws, and a member of the Council on Medical Service.

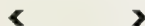
Dr. Orr was graduated from Emory University Medical School in 1924. He served as a resident in urology and general surgery in the old Lakeside Hospital, Cleveland, and opened his practice in Orlando in February 1927.

He has made more than 50 contributions to the scientific literature, and was president of the southeastern section of the American Urological Association in 1943. He is a founding member of the American Board of Urology.

1959 annual meeting of ISMS a success

The 1959 annual meeting of the Illinois State Medical Society was a successful one. It drew a physician attendance of 1,833, or only 11 under that of 1958. The total registration, including exhibitors, Auxiliary, guests, medical students, and interns, was 2,976, as against 3,117 in the preceding year.

Actions of the House of Delegates will be reported in detail in a later supplement to the Illinois Medical Journal. Among the steps taken was an increase of \$10 in the annual dues to \$50, which will be divided as follows: \$20 to the American Medical Education Foundation, \$2 to the Benevolence Fund, and \$28 for general Society purposes. The increase will go into effect in 1960.



Scientific exhibit award winners at annual meeting

The winners of scientific exhibit awards at the annual meeting were:

For original work—gold medal, "Cervical Epithelial Dysplasia — Experimentally Produced," Harold A. Kaminetzky, Elizabeth A. McGrew, Richard Phillips, Otto Saphir, and Michael Leventhal of the University of Illinois and Michael Reese Hospital; silver medal, "Open Healing of Tuberculous Cavities," J. Robert Thompson of the Municipal Tuberculosis Sanatorium; bronze medal, "The Adrenal Cortex in Health and Disease," Hans Elias and John E. Pauly, Chicago Medical School.

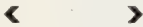
For educational value—gold medal, "Roentgen and Hematological Manifestations of the Congenital Hemolytic Anemias," John J. Litschgi of the Cook County Hospital, Hektoen Institute for Medical Research; silver medal, "Bronchography," Hiram Langston, Anton Pantone, Myron Melamed, and Noble Correll of the Chicago State Tuberculosis Sanitarium; bronze medals (2), "Buccal and Enteric Coated Trypsin—A Review of 150 Cases," John M. Coleman and Arkell M. Vaughn of the Cook County Hospital, Mercy Hospital-Loyola Clinic, and Vaughn Medical Group; "Old Doc, First Auto Test Driver," Harold M. Camp and Theodore R. Van Dellen of the Illinois Medical Journal.

Askey AMA president-elect; Percy Hopkins a trustee

Dr. E. Vincent Askey of Los Angeles, speaker of the AMA House of Delegates since 1955, was named president-elect at the recent AMA annual meeting in Atlantic City. Dr. Askey will succeed Dr. Louis M. Orr of Orlando, Fla., who was installed as the 113th president of the AMA.

Dr. Percy E. Hopkins of Chicago, past president of the Illinois State Medical Society and chairman of the Committee on Medical Service and Public Relations, was elected a trustee to fill the four year unexpired term of the late Dr. Warren W. Furey of Chicago. Dr. Hopkins is president of the Illinois Medical Service (Blue Shield in Illinois.)

Others elected were: Dr. James S. Kenney of New York, vice president; Dr. Norman A. Welch of Boston, speaker of the House of Delegates; Dr. Milford O. Rouse of Dallas, vice speaker.



New Medicare ruling on malignancies

Malignancies, either suspected or proved, which require urgent attention and where surgery cannot be planned for may now be eligible to receive care from civilian physicians under the Medicare Program, according to a directive dated June 1, 1959.

The interpretation of restrictions put into effect last October requiring that such cases be treated in military hospitals and by military personnel is being modified when, in the opinion of the physician, postponement is not advisable.

Such cases will be considered payable at government expense if they meet the criteria that, in the opinion of the physician-in-charge, treatment is urgently required and must be performed in a hospital without delay; and that such care should not be considered plannable. The dependent must be eligible for care and have a Medicare permit if necessary.

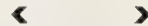
The government will be responsible only if the physician certifies that hospital care is urgently required for the patient's welfare. Such qualifications of urgency cannot be based, for payment at government expense, on mental anguish, emotional attitudes, or socio-economic factors involving the patient and/or sponsor, but

will be based solely on the medical requirement for immediate hospitalization.

Biopsies, either positive or negative, performed on dependents eligible for care of suspected or proved malignancies are payable, provided the physician in charge indicates the need for hospitalization and states the biopsy is required to manage properly the suspected or proved malignancy. However, biopsies are not authorized for payment when performed on an outpatient basis.

In cases where X-ray therapy is prescribed, rather than surgery, including radium or radioisotope therapy, the patient need not be hospitalized during the entire length of treatment in order to qualify for Medicare benefits. However, it is necessary that such urgently required treatments either be prescribed or begun during the initial authorized period of hospitalization, but the patient will continue to be entitled to benefit under the Medicare program during his subsequent and continuing treatment on an outpatient basis.

The new ruling does not authorize care for warts, nevi, moles, hemangiomas, telangiectatic lesions, keloids, verrucae, condylomata, molluscum, scars, or other similar conditions where the treatment is primarily for cosmetic reasons. To be authorized for payment, the claim must be supported by clinical evidence that would indicate prompt hospitalization for an existent malignancy.



Editorials from other journals

Euphemisms in advertising copy

The mailman, the other day, brought in an advertisement for a new drug to be used for constipation. The copywriter—apparently anxious to avoid that ugly word—referred to it as “fecal frustration.”

Thus, there has been opened up a new field of semantic ingenuity. Instead of treating baldness, why not treat smoothness of the scalp? One might advertise a new astringent for diarrhea by saying: “If it never rains but it pours, use sweet tincture of chalk.” The makers of anti-hemorrhoidal ointments could advertise: “For the bright spot of the day, use Pilosoothe.”

We leave it to our readers to find a euphemism for impotence. *Editorial. J. M. Soc., New Jersey, Apr. 1959.*

'Insurance carriers may kill private medicine'

Government medicine may come to the United States not through "the sinister work of politicians" but from a source "few doctors would suspect": the health insurance industry. Within a few years, insurance underwriters may lead a national move away "from the private-enterprise solo practitioner to the full-time paid medical expert" who works for "a governmental department." That's the prediction of Dr. Vernon R. DeYoung Jr., writing in *The Progressive*.

And why might insurance companies "insist that the medical profession become governmentalized"? They may feel forced to do so to combat the high costs and varying quality of individualized medicine. As businessmen, they're out to bring "actuarial soundness" to the health insurance industry, says DeYoung.

Right here today's private practitioners of medicine can take a lesson from the fate of the individual fire fighters of a century ago, he argues. The volunteer firemen "worked free lance and responded to as many fires as they could." But the great Chicago Fire of 1871 bankrupted more than a hundred insurance companies. Then "the National Board of Fire Underwriters . . . realized that the insurance companies could no longer remain solvent" when dependent upon free lance firemen.

The big change came fast, as Dr. DeYoung thinks it might in medicine. By 1876, "as the result of pressure from the insurance companies," 275 American communities had "full-time fire departments with an adequate standard of equipment."

Private physicians—today's free lance "sickness fighters"—soon "may feel the same kind of pressure [for government reorganization of medicine] from . . . the health insurance industry," Dr. DeYoung suggests.

But private practitioners can divert the pressure into directions more to their liking, he adds. They can "show . . . a social maturity that would give the public a feeling that doctors should have a leading role" in controlling the pattern of medicine tomorrow.

Dr. DeYoung urges that a first step is to start living up to some of the profession's "excellent slogans." His examples of slogans that he thinks just don't fit the facts:

1. "*High quality of medical care.*" Comments Dr. DeYoung: "A North Carolina study . . . revealed that there were tremendous variations in the quality of medical care, with more than 44 per cent [of general practitioners] doing 'poor' work."

2. "*Free choice of physician.*" This may be one of medicine's favorite "battle cries," yet it's not one of the most accurate, Dr. DeYoung says. For example, "in . . . Chicago . . . about a million people a year have to get their medical services at Cook County Hospital. There is no choice of physician there. It is charity service, and physicians . . . seem not to realize that in a democracy all persons should have the choice of their physicians, not just the paying patients."

3. "*Greater distribution of medical services.*" Doctors "glory in the fact that 72 per cent of the population is now covered by 'some form of health insurance,' and predict that this proportion can be raised to 80 per cent. But in a democracy you can't ignore 20 per cent of the population, and 'some form of health insurance' may not be at all adequate."

Unless physicians find ways to back up their own slogans, society will do it for them, says Dr. DeYoung. Then the medical profession "will have to follow the lead of the people through their government or their insurance companies." Copyrighted, 1959, by *Medical Economics*, Pradell, N. J. Reprinted by permission.



Tetanus immunization

One of the great satisfactions in the science of medicine is the development of agents that will eliminate or control a disease entity. Yet too many persons delay availing themselves of the use of an agent that has proved effective.

Public health reports in California show that the incidence of poliomyelitis in the opening months of 1959 is running about double the number of cases recorded in the same 1958 period. A portion of the same report shows that some 70 per cent of the current victims have not had the Salk vaccine shots, which provide a high degree of immunity from the paralyzing forms of the disease.

Here is an agent that has had widespread publicity, professional promotion, public appeals, public fund-raising, and all the modern gim-

micks Madison Avenue can supply. Yet a large number of people forego its use.

While Salk vaccine has had the advantage of modern advertising and publicity techniques, an even more effective immunizing agent rests in our hands, in the form of tetanus toxoid. Its use has been well established, its record of effectiveness in preventing tetanus has been proved beyond question, and its availability accepted *a priori*.

Elsewhere in this issue appear two articles on tetanus, one of them by a public health official describing 232 cases recorded in a six-year period. The statistics in this paper point to some important conclusions. Tetanus is no respecter of area, of age, or of the site where infection occurs. Tetanus caused death in 47 per cent of all cases listed for this six-year period. Thirty of California's 58 counties reported tetanus cases in the period reviewed and these covered metropolitan and rural areas, mountainous and valley districts, northern and southern counties.

As to causative factors, the list shows a wide variety, including punctures, lacerations, abrasions, crushed digits, ulcers, burns, infections, surgical complications, compound fractures, gangrene, bullet or knife wounds, and even abortions.

Even where tetanus antitoxin was administered following an injury and before the onset of symptoms, a large proportion of the patients died. One of the two articles in this issue emphasizes the hazards of the use of antitoxin and indicates the nicety of decision that devolves upon a physician contemplating use of the serum in a patient with a tetanus prone wound.

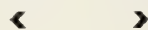
The physician is thus left with the cold statistical fact that practically any injury that opens the skin is to some degree susceptible to tetanus infection. Against the possibility of infection he must weigh the knowledge that the use of antitoxin may cause severe disease in a rather high proportion of cases. If the patient has had previous immunization with toxoid, the decision is a much easier one. But few patients can provide information as to whether or not they have had tetanus toxoid in the past or, if they do remember it, few can say when the last booster injection was given.

Although tetanus has not been advertised as an important public problem over the years its deadly character has not diminished. Public health records show that in the period 1920-1924,

when California's population was much smaller and when immunization was not yet in wide use, there were 264 cases and the mortality was 82 per cent. While modern records present a striking improvement over those of some years ago, a mortality rate of 47 per cent today represents a shocking challenge. Fortunately, the challenge is one which can be met successfully.

Although the number of cases of tetanus reported does not loom large in a state with California's population, the fact that immunization is available for a disease known as a killer should call for sober reflection by all physicians. Before too long a time, we hope, there may be a crash program to secure tetanus immunization for all our citizens. When such a campaign is organized, it would have at its command all the publicity techniques that have been applied to venereal disease and to poliomyelitis. With tetanus, the prognosis of immunization is even more favorable than with these other scourges that have been controlled, if not obliterated, through the combination of effective preventive or therapeutic measures and an aroused public and profession.

Until that day comes, it is the duty of every physician to urge tetanus immunization on his patients, to keep records to show when booster shots are due, to impress patients with the importance of maintaining immunity and of being able to tell any attending physician when he had his most recent booster, and to remain ever alert to the death-dealing character of this disease.
—*California Med. May 1959.*



Council meeting minutes

The first meeting of the Council, held during the annual meeting of the State Society, was a dinner meeting on Monday evening, May 18, 1959, with the following present: Oldfield, O'Neill, Lorne Mason, Camp, Hesselstine, Reichert, Portes, Piszczek, Blair, Endres, Reisch, DuPuy, Goodyear, English, Montgomery, Fullerton, Reavley, Hopkins, Neece, Norbury, Newcomb, Mr. Mirt, Mr. Oblinger, Frances Zimmer, and Margaret Maloney.

The Council welcomed Dr. Camp who had been unable to attend the Council meeting on April 26th. Dr. Camp expressed his appreciation for the flowers and cards, received from the

Council while a patient in Wesley Memorial Hospital.

MANAGEMENT SURVEY: Dr. Montgomery presented a partial report of the management survey prepared by Mr. Roscoe C. Edlund of Rogers, Slade & Hill of New York, and asked what the will of the Council might be relative to the presentation of the material in outline form before the first meeting of the House as a supplementary report of the Chairman of the Council. The report would be considered a progress report; the material can be printed and mailed to all members of the House, together with recommendations from the Council, following the reorganization meeting.

Dr. English discussed the manner in which the "Heller Report" was handled by the American Medical Association, and felt that similar procedure probably should be employed by the state society.

Since many changes in the Constitution and Bylaws would result from the acceptance of various recommendations, this also must be considered when the House meets to consider action on the report.

MOTION: (English-Hesseltine) that the Chairman of the Council present a progress report to the House of Delegates, and incorporate in his statement the fact that the Rogers, Slade and Hill material will be printed and mailed as soon as possible. Discussion by Hesseltine, Reavley, Montgomery, English. Motion carried.

Dr. Montgomery reported that the Medical Advisory Committee to the IPAC was recommending to the Commission that they allow the increase in fees for physicians, then ask for an emergency budget when it becomes necessary.

The Council adjourned in time for the members to attend the first meeting of the House of Delegates that same evening.

The second meeting of the Council, held during the annual meeting, was a breakfast session on Tuesday morning, May 19, 1959 at 8:30 o'clock. The following were present: Oldfield, O'Neill, Lorne Mason, Clark, Hesseltine, Reichert, Portes, Blair, Endres, Reisch, DuPuy, Goodyear, English, Montgomery, Fullerton, Hamilton, Reavley, Hopkins, Norbury, Bornemeier, Dailey, Dr. Olson, President of the Indiana Society, Dr. Frank Meleney of Miami, Fla., Swan-

berg, Oblinger, Mirt, Esther Fraser, Margaret Maloney, and Frances Zimmer.

ORGANIZATION OF DISTRICT COMMITTEES: Dr. Montgomery called the attention of the Councilors to the fact that if certain changes in the Constitution and Bylaws were approved, District Committees must be set up, selected by the delegates from the various counties in each Councilor area, meeting with the Councilor. If the meeting cannot be arranged during the annual meeting, this should be done as soon as possible so that work may proceed under the amended bylaws.

Dr. Hopkins stressed the importance of the work of the Committee on Industrial Health in the development of panels for impartial medical testimony; also the fact that members of the Council should attend the reference committee meeting considering the care of the "over 65" group.

The list of reference committee meetings assigned to Councilors was read by Dr. Montgomery, and a copy was to be posted in the secretary's office, Room 104.

Dr. Hopkins discussed in detail the importance of the co-operation of the medical profession in any plan for the care of individuals over 65; the need for accepting the amount of the coverage as payment in full (the service type plan) instead of an indemnity type insurance as is the case at the present time. If this plan is approved, over half of the physicians in each county must sign to participate before it can be initiated in that area. Blue Shield would have to survey the medical profession in the state, county by county, and an active educational program will have to be conducted.

MOTION: (Reisch-DuPuy) that the Council approve a gift and the presentation of a plaque to Dr. Camp in recognition of his 35 years of service as secretary of the Society. Motion carried.

Dr. Vaughn stated that in Arizona the physicians have requested the various pharmaceutical houses to donate to the AMEF in place of presenting gifts to physicians at any time. He asked if such procedure could be followed in Illinois. The chairman stated that he might try this and see whether or not it would be successful.

The Council adjourned about 9:30 o'clock to attend meetings of the reference committees.

The third meeting of the Council was a breakfast meeting at 8:30 o'clock on Wednesday morning, May 20, 1959, with the following present: Oldfield, O'Neill, Youngberg, Camp, Clark, Hesseltine, Reichert, Piszczek, Reisch, DuPuy, Goodyear, English, Montgomery, Fullerton, Hamilton, Reavley, Hopkins, Bornemeier, Sweeney, Norbury, Greening, Vaughn, Oblinger, Mirt; Frank Skaggs, G. R. Johnson and D. A. Lehman of Harrisburg, Margaret Maloney, Esther Fraser, and Frances Zimmer.

MOTION: (English-Piszczek) that Dr. Coye C. Mason be the official representative of the ISMS on the Board of the Central District Blood Bank Clearing House with a term from July, 1959 through June, 1960. Motion carried.

Dr. Dailey introduced Dr. Saltonstall, president of the Michigan State Society.

Dr. Hesseltine stated that the Finance Committee had met and gone over the report of the auditor, discussed the problems referred to the committee, and if it meets with the approval of the Council, will continue to function at this time. There were increased expenses during the year; the committee recommends that the expenses as allocated by the auditor constitute the budgets for the coming fiscal year.

MOTION: (Hesseltine-Piszczek) so move. Motion carried.

The finance committee does not have a recommendation to make relative to dues for the coming year at this time. The members of the committee, in discussing the budget, thought it might be helpful if the new finance committee could arrange to meet with the auditor to discuss committee budgets, and see if salaries can be taken from committee expenses. If this were done it would reduce the committee expense by about half in some cases. We might reshift this and distribute the amounts with the co-operation of the auditing firm.

MOTION: (Hesseltine-Fullerton) that the Finance Committee for the 1959-1960 fiscal year meet with the auditor. Motion carried.

MOTION: (Hesseltine-Piszczek) that the Society contribute an additional \$1,000.00 to WTTW (Channel 11) which will duplicate the contribution made in 1955 by action at the August 7th Council meeting. Motion carried.

Dr. Bornemeier reported that the Auxiliary dues of \$3.00 would assist them in the near future to become more financially independent

of the state society, and with their present membership, their income would be approximately \$8,700.00 Their recruitment program has been very successful, and they plan to continue this work.

Dr. Montgomery suggested that next year all resolutions be numbered, and that reference committee meetings be equipped with blackboard, chalk, and erasers.

The fourth meeting, held during the annual meeting, was a breakfast session on Thursday morning, May 21, 1959, with the following present: Oldfield, O'Neill, Youngberg, Clark, Hesseltine, Portes, Piszczek, Dooley, Endres, Reisch, DuPuy, Goodyear, English, Montgomery, Fullerton, Hamilton, Reavley, Hopkins, Dr. Billingsly of Iowa, C. Paul White, Dr. Perry, president of Missouri Society, Fowler, Sweeney, Neece, Dailey, Norbury, Oblinger, Margaret Maloney, Esther Fraser, and Frances Zimmer.

Dr. Hesseltine asked for Council approval of the suggestion that the members of the present finance committee continue to function until the new committee has been appointed.

MOTION: (Fullerton-Piszczek) so move. Motion carried.

Dr. Billingsly of Newton, Iowa, president of that society, told of the debate and subsequent action on the part of the Iowa House of Delegates relative to a service plan for residents of Iowa over 65 years of age. After a lengthy meeting, approval was given. After a certain income and net worth level, the service plan then becomes indemnity coverage. The work is to be considered a pilot study and the plan reevaluated at the end of a two year period. Iowa was the first state to approve the coverage, with California following three days later.

Discussion followed — Hopkins, White, etc., with the fact stressed that the work was still experimental on an actuarial basis, but that the demand for this type of coverage is paramount, coming from government, labor unions, and the population itself. Hamilton suggested that an extensive educational campaign is certainly indicated; that our program should agree with the recommendations of the AMA, and that there should be a ceiling on income.

Dr. Fowler outlined contemplated activity in various fields; he stressed the importance of the dues structure of the Society and the fact that

the complete picture should be presented to all members of the House of Delegates so that members of the House can keep their societies informed, following annual or special meetings of the House.

The Council adjourned at 9:00 o'clock to attend the meeting of the House of Delegates.

The fifth meeting of the Council, held during the annual meeting, was a luncheon session on Friday noon, May 22, 1959, with the following present: Oldfield, O'Neill, Camp, Clark, Hesseltine, Portes, Piszczek, Endres, Reisch, DuPuy, Goodyear, English, Montgomery, Fullerton, Hamilton, Reavley, Hopkins, Lee Hamm, Mrs. Montgomery, Mrs. Hesseltine, Mrs. O'Neill, Mrs. Oldfield, Mrs. Reavley, Bornemeier, Ralph Redmond, William E. Adams, Bernard Klein, Van Dellen, Fowler, Turner, Scatliff, Mr. Oblinger, Mr. Mirt, Esther Fraser, Margaret Maloney, and Frances Zimmer.

Dr. Montgomery opened the meeting, stating that he and Dr. Hamilton had to leave to attend a special meeting with representatives of the IPAC, and that he desired to pay tribute to the many years of loyal service Dr. Hamilton had rendered the Society as a member of the Council. Dr. Hamilton thanked the chairman; stated that he left with mixed emotions, that he valued the friendships he had made, and that he left with no regrets and no apologies. Dr. Montgomery asked Dr. O'Neill to preside until his return.

MOTION: (Fullerton-Piszczek) that the secretary be authorized to pay current bills. Motion carried.

Following Dr. Montgomery's return, the Council presented Dr. Camp with a plaque signed by all members commemorating his 35 years of service as secretary of the Society. Dr. Reisch called attention of the Council to the fact that this year represented Dr. Camp's 37th year on the Council, his 35th as secretary, and his 50th year in the practice of medicine. The men gave him an atmospheric clock engraved with his name and the years of his tenure of office 1924-1959.

Dr. Oldfield presented a President's Medallion

to Dr. O'Neill to wear during his year as president, then to be presented to his successor. Mrs. Oldfield had had it made for him during his year as president. The center of the medallion (a caduceus) has been made up separately as a key to be worn by past presidents. Dr. Oldfield had one to present to Dr. Reavley, one for himself, and one for Dr. O'Neill, and suggested that the Society continue the custom.

Dr. O'Neill suggested that the Council extend official appreciation to Dr. and Mrs. Oldfield for the medallion, and that in the future, it be known as the "Raleigh C. Oldfield medallion", and that the Society bestow the "key" to the past presidents of the Society in the future.

MOTION: (English-DuPuy) that the Society send an additional \$7,000.00 to the Student Loan Fund. Motion carried.

Dr. Montgomery called the attention of the Council to the fact that this was Dr. Reavley's last official attendance as councilor at large.

The Council adjourned sine die.

The sixth meeting, held Friday, May 22, 1959, was called to order with the same people in attendance. Dr. Camp assumed the chair. The first order of business was the election of the Chairman of the Council for the coming fiscal year.

Dr. Portes presented the name of Dr. B. E. Montgomery in nomination.

MOTION: (Piszczek-Oldfield) that the nominations be closed and the secretary instructed to cast a unanimous ballot for Dr. Montgomery. Motion carried.

At this time, Dr. and Mrs. H. Close Hesseltine presented the Chairman of the Council with a gavel carrying the seal of the Society, to be passed from chairman to chairman as a symbol of the office.

Dr. Montgomery announced that the next meeting of the Council would be held on Sunday, July 26th, and that by that time, the reprinted Rogers, Slade & Hill reports should be ready for mailing to all members of the House of Delegates. At this time, he would recommend for the membership of the Ad Hoc Committee — Edwin S. Hamilton, Chairman, H. Close Hesseltine, Joseph T. O'Neill.

MOTION: (English-Piszczek) that the personnel be approved. Motion carried.

Dr. English called the attention of the Council to the fact that when copies of the Edlund report are distributed, comments and recommendations from the Council should accompany them.

MOTION: (Hesseltine-English) that the report be reprinted for distribution to the delegates and alternates to the 1959 House of Delegates. Motion carried.

Dr. Montgomery introduced Dr. Hesseltine as president elect; Dr. Lee Hamm as first vice president; Dr. Allison L. Burdick as second vice president; Dr. Ralph Redmond as councilor from the Second District; Dr. William E. Adams as councilor from the Third District, and Dr. Bernard Klein as councilor from the Eleventh District.

Dr. Montgomery stated that in the future all delegates and alternates to the AMA would be invited to attend Council meetings as a matter of education and information.

The Council adjourned at 1:35 o'clock.

Respectfully submitted,

HAROLD M. CAMP, M.D., Secretary

By: FCZimmer

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Ike talk; house actions highlight AMA meeting

Among the highlights of the 1959 annual meeting of the AMA in Atlantic City were:

(1) An address by President Eisenhower at the inaugural ceremony, in which he warned that inflation posed the greatest danger to the traditional, free enterprise practice of medicine.

(2) Recommendations concerning medical care plans.

(3) A new position on interprofessional relations with osteopathy.

(4) A policy covering preparation for general practice.

(5) Continued opposition to social security for physicians.

EISENHOWER ADDRESS

Mr. Eisenhower said the cost of inflation "is not paid in dollars alone but in increasingly stagnated progress, lost opportunities, and eventually, if unchecked, in lost freedoms for the doctor and the patient." He expressed gratification at being informed of the AMA leadership

in the program to meet health care needs of the aged.

MEDICAL CARE PLANS

The House of Delegates received Part I of the report of the Commission on Medical Care Plans as information only and then acted upon the Commission recommendations item by item. The House adopted 36 of the recommendations without change, but rewrote three which relate to miscellaneous and unclassified plans. The changed recommendations now read as follows:

B-4. "In an effort to decrease, or at least to prevent an increase, in the over-all cost of health care, study should be given to the removal of the requirement of hospital admission as the only condition under which payment of certain benefits will be made."

B-6. "Medical care plans should be encouraged to increase their efforts to provide health education and information concerning the coverage of their subscribers."

B-16. "The AMA believes that free choice of physician is the right of every individual and one which he should be free to exercise as he chooses. Each individual should be accorded the privilege to select and change his physician at will or to select his preferred system of medical care and the AMA vigorously supports the right of the individual to choose between these alternatives."

In connection with free choice of physician, the House also requested the Board of Trustees to transmit to all constituent medical associations the "far-reaching significance" of Recommendation A-7, which says:

"'Free choice of physician' is an important factor in the provision of good medical care. In order that the principle of 'free choice of physician' be maintained and be fully implemented, the medical profession should discharge more vigorously its self-imposed responsibility for assuring the competency of physicians' services and their provision at a cost which people can afford."

The House also strongly endorsed recommendation B-11, which declares that "those who receive medical care benefits as a result of collective bargaining should have the widest possible choice from among medical care plans for the provision of such care."

Many of the commission recommendations

urged increased activity by state and county medical societies and the AMA in such fields as continuing study and liaison, closer attention to legal and legislative factors, and the development of guides for the relationship between the medical profession and the various types of third parties. To carry out three of the recommendations involving AMA activities, the House also approved a seven-point program which it requested the Board of Trustees to transmit to the Division of Socio-Economic Activities for immediate attention.

MEDICINE AND OSTEOPATHY

In considering a special report of the Judicial Council on the subject of osteopathy, the House adopted the following policy statement regarding interprofessional relations:

“(A) All voluntary professional associations between doctors of medicine and those who practice a system of healing not based on scientific principles are unethical.

“(B) Enactment of medical practice acts requiring all who practice as physicians and surgeons to meet the same qualifications, take the same examinations and graduate from schools approved by the same agency should be encouraged by the constituent associations.

“(C) It shall not be considered contrary to the Principles of Medical Ethics for doctors of medicine to teach students in an osteopathic college which is in the process of being converted into an approved medical school under the supervision of the AMA Council on Medical Education and Hospitals.

“(D) A liaison committee be appointed by the Board of Trustees of the AMA to meet with representatives of the American Osteopathic Association, if mutually agreeable, to consider problems of common concern including interprofessional relationships on a national level.”

In another action concerning osteopathy, the House recommended that the AMA representatives on the Joint Commission on Accreditation of Hospitals suggest to the commission that they inspect upon request and consider for accreditation without prejudice those hospitals required by law to admit osteopathic physicians to their staff.

GENERAL PRACTICE

The House approved and commended the final report of the Committee on Preparation for

General Practice, which proposes a new two year internship program for medical school graduates planning to become family physicians. To avoid unnecessary confusion, the House deleted only one sentence which read: “Indeed, the committee believes that the one year internship actually encourages inadequate preparation for general practice.” The Committee on Preparation for General Practice included representatives from the AMA Council on Medical Education and Hospitals, the American Academy of General Practice, and the Association of American Medical Colleges.

The suggested program would include a basic minimum of 18 months’ hospital training in the diagnostic, therapeutic, psychiatric, preventive, and rehabilitative aspects of medicine and pediatrics in a very broad sense, including care of the newborn. A physician then could elect to spend the remaining six months on additional training in other segments of the program. The committee stated, however, that participants who plan to practice obstetrics would be expected to spend a least four months of the elective period in obstetrical training.

The report declared that “the graduate program of two years in preparation for family practice should be planned and implemented as a unified whole” with a maximum continuity of assignment in specific services. The program also calls for adequate experience in outpatient care and emergency room service.

SOCIAL SECURITY

In considering five resolutions on the subject of compulsory social security coverage for self-employed physicians, the House disapproved of four and adopted one, reaffirming its opposition to the compulsory inclusion of physicians. In so doing, the delegates expressed concern over the possible effects that a change of policy might have on the association’s entire legislative program, particularly with respect to the Forand Bill.

The House also recognized “the apparent growing demand by physicians for economic security” and requested the Board of Trustees to investigate the possibilities of developing group insurance and retirement plans that could be made available to association members. It accepted a reference committee suggestion “that the AMA continue and expand its educational

program to inform its members of the economic, social, and moral advantages of economic security obtained within the framework of our free enterprise system rather than through the mechanisms of governmental social security."

MISCELLANEOUS ACTIONS

In dealing with a wide variety of other subjects, the House also urged all physicians to participate more fully in community activities and socioeconomic matters in their own communities but agreed that no change should be made at this time in Article II of the Constitution, which states Association objectives;

Approved in principle the aims and objectives of the President's Council on Youth Fitness and the Citizens' Advisory Committee on the Fitness of American Youth;

Accepted a Board of Trustees recommendation that the 1962 annual meeting be held in Chi-

cago;

Requested the Board of Trustees to study the problems and possibilities of establishing an AMA — sponsored medical scholarship and/or loan program;

Approved the inclusion of Today's Health as a benefit of dues paying membership and urged members to make it available to their patients;

Recommended that state medical societies, where advisable, initiate legislative efforts to eliminate cancer quackery;

Received a progress report indicating "phenomenal progress" in the field of health insurance coverage for the aged since the Minneapolis meeting last December;

Voted the 1959 Distinguished Service Award to Dr. Michael E. De Bakey of Houston for his outstanding contributions in the field of cardiovascular surgery.



*Coming in our
August issue —
A picture report
on the 1959
annual
meeting*



Questions and Answers on Narcotic Act

Many questions have arisen concerning the new Illinois Narcotic Act.

Mr. Malachi L. Harney, superintendent of the division of narcotics, who has always been co-operative in trying to iron out physicians' problems and questions concerning the use of narcotics under the new law, has prepared some basic questions and answers that have reached him during the past year.

The Committee on Narcotics will be happy to answer additional questions concerning the use of narcotics under the new state law. They will be answered in this column in forthcoming issues.

Q: Must a physician register with the State Division of Narcotic Control to be lawfully entitled to prescribe, dispense, or administer narcotics?

A: No. Physicians do not register with the Division of Narcotic Control. There are FEDERAL requirements for registration and re-registration. A physician shall execute and file with the District Director of Internal Revenue, for the district in which he proposes to engage in any activity involving use of narcotic drugs, an application for registration, on Form 678, and pay the special tax of \$1.00. Form 678 shall be executed and filed on or before the succeeding July 1, and annually thereafter, so long as liability is incurred. The tax is at the rate of \$1.00 a year or any fraction thereof, regardless of when business is first commenced.

Q: How does a physician get official prescription blanks in Illinois?

A: By sending his application, or re-order blank, to the Division of Narcotic Control, 1012 Myers Building, Springfield, Illinois, with the required fee of \$1.00 for each 100 prescription blanks.

Q: What information must the physician furnish on his application or re-order blank?

A: Name, address, and federal narcotic registry number.

Q: Can a physician order more than 100 prescription blanks at one time?

A: No. The prescription blanks issued by the Division shall be in serial-numbered groups of 100 forms each, in triplicate, and no more than one such prescription group shall, in any case, be issued or furnished by the Division to the same prescriber at one time.

Q: When does the physician use official prescription blanks?

A: The physician is required to use official prescription blanks when he prescribes Class A narcotic drugs for his patients. However, if the physician prescribes Class B narcotic drugs, he *may* use either the official prescription blanks, or his regular prescription blanks. Class B narcotic drugs also may be prescribed over the telephone or orally (verbally). The pharmacist must reduce such prescription to writing, place in the narcotic file, and keep for a period of two years.

Q: What are Class A drugs?

A: These are taxable narcotics under full control; these are the more potent narcotics, such as cocaine, opium, morphine, Dilaudid®, Pantopon®, codeine in uncombined form, and the synthetic opiates like Demerol® and Dolophine®. These prescriptions cannot be refilled.

Q: What are the other classes of narcotic drugs?

A: Class B (taxable narcotics, permissible on oral prescription), such as empirin compound with codeine, Phenaphen® with codeine. These prescriptions cannot be refilled. Class X (exempt narcotic preparations), such as paregoric, elixir terpin hydrate with codeine, Cheracol®, and cough mixtures containing not more than 1 grain of codeine to the ounce.

Q: What records must be made in connection with Class X narcotics?

A: The patient may obtain these drugs over the counter without prescription. However, the pharmacist must keep an over-the-counter sales record. If a physician issues a prescription for Class X narcotics, it should be filed in the pharmacist's narcotic file. In modern pharmaceutical packaging of opiates, the class — A, B, or X — is indicated on the label. In case of doubt, the pharmacist should be asked to consult the label. The Division of Narcotic Control has an unofficial list of narcotic drugs, by classes, that will be furnished to any practitioner on request.

Q: May the official prescription blank be em-

ployed for obtaining drugs for office or bag use?

A: No. There is considerable misunderstanding in this area. However, long-standing federal practice requires that all such supplies must be purchased by the physician on federal order forms, which are obtained from the Director of Internal Revenue (10c for 10 order forms). This is the only proper and legal way of obtaining office or bag supplies of narcotic drugs.

Address your queries to the Editors of the Journal or to Jacob E. Reisch, M.D., chairman, committee of narcotics, Suite 1909, 185 N. Wabash Avenue, Chicago 1.

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Octin for migraine

Octin (methylo-octenylamine, Knoll) is another antispasmodic drug which acts as a vasoconstrictor in some patients and in them may prove useful in relieving headaches of the migraine variety. It is seldom used by mouth, but on occasion, a 130 mg. tablet of Octin mucate

is of value. When administered parenterally, Octin hydrochloride is given in a dose of 0.5 to 1.0 cc. intramuscularly. This drug may be used with safety during pregnancy, but it may cause hypertension and should never be given to patients with vascular disease. *Russell N. DeJong, M.D. The Treatment of Vascular Headaches. GP Apr. 1959.*

CORRESPONDENCE



Sports Medicine Congress to meet at Pan-American Games

A Sports Medicine Congress will be held in conjunction with the 3rd Pan American Games, which are scheduled for Chicago next August 27-September 7.

The Congress will meet on the Chicago campus of Northwestern University, September 1-2, and will feature outstanding experts in the fields of athletic training, care of injuries, diet, cardiovascular effects of sports activity, and many other facets of the sports medicine field.

T. R. Van Dellen is general chairman of the Congress.

Paul Dudley White, Boston, will be the featured speaker at the first plenary session of the Congress September 1. On September 2, Allen J. Ryan, attending surgeon and physician specializing in treatment of athletic injuries, Menden Conn. Hospital, will be the speaker.

Other speakers scheduled on the Congress program include Louis F. Bishop, assistant clinical professor of medicine, New York University; Felipe Mendoza, head of the National Institute of Cardiology, Mexico City; Warren R. Guild, associate in medicine, Peter Bent Brigham Hospital, Boston, and associate in medicine, Harvard Medical School; Joseph B. Wolfe, chief of medicine, Department of Cardiovascular Diseases, Valley Forge Hospital and Medical Center, Norristown, Pennsylvania.

Also, Arthur Steinhaus, professor of physiology and dean George Williams College, Chicago; Peter Karpovich, research professor of physiology, Springfield College, Springfield, Massachusetts; James R. Wilson, lecturer Massachusetts Institute of Technology and consultant to Chicago Board of Health; Edward L. Compere, professor and chairman of the Department of Orthopedic Surgery, Northwestern University Medical School; Irwin Schultz, diplomate American Board of Surgery, member American Association for Surgery of Trauma, and medical director of Milwaukee Braves baseball club; W. D. Paul, director of the Rehabilitation Unit, University hospitals, and medical supervisors of varsity athletics, State University of Iowa; and Thomas J. Cureton, director of physical fitness research laboratories, University of Illinois.

Col. David Stubbs, director of physical education, Metropolitan Y.M.C.A., Chicago, will be another featured speaker, as well as three of the nation's foremost track and field coaches: J. Kenneth Doherty, University of Pennsylvania; M. E. "Bill" Easton, Kansas University; and E. M. "Ted" Haydon, University of Chicago.

Three outstanding athletic trainers also are on the program: Dr. Joseph Doller, Chicago Cardinals football club; Frank Newell, Purdue University and Thomas E. Healion, Northwestern University.

All sessions of the Congress will be open to persons interested in the field of sports medi-

cine. Further information can be obtained from Dr. Van Dellen at Pan American Games, Inc., 310 South Michigan Avenue, Chicago 4.

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Clinics for crippled children listed for August

Nineteen clinics for Illinois' physically handicapped children have been scheduled for August by the University of Illinois, Division of Services for Crippled Children. The Division will count 15 general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical, social, and nursing service. There will be two special clinics for children with cardiac conditions and two for children with rheumatic fever. Clinicians are selected from among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

August 5 — Alton (Rheumatic Fever), Alton Memorial Hospital

August 5 — Hinsdale, Hinsdale Sanitarium

August 5 — Tuscola, Community Building

August 6 — Macomb, McDonough District Hospital

August 7 — Chicago Heights (Cardiac), St. James Hospital

August 11 — East St. Louis, St. Mary's Hospital

August 11 — Peoria, Children's Hospital

August 13 — Springfield, St. John's Hospital

August 13 — Effingham, St. Anthony Hospital

August 14 — Evanston, St. Francis Hospital

August 18 — Belleville, St. Elizabeth's Hospital

August 19 — Chicago Heights (General), St. James Hospital

August 20 — Elmhurst (Cardiac), Memorial Hospital of DuPage County

August 20 — Litchfield, Madison Park School

August 20 — Rockford, Rockford Memorial Hospital

August 25 — Effingham (Rheumatic Fever), St. Anthony Hospital

August 25 — Peoria, Children's Hospital

August 26 — Elgin, Sherman Hospital

August 27 — Bloomington, St. Joseph's Hospital

I.C.S. North American Federation to meet in Sept.

The 24th annual congress of the North American Federation, International College of Surgeons, will be held in the Palmer House, Chicago, September 13-17.

The federation is composed of the United States, Canadian, Mexican, Cuban, and various Central American sections, but the program participants will include surgeons from other parts of the world, Dr. Max Thorek of Chicago, founder and secretary general of the college, said.

The meeting will be in honor of the Chicago Medical Society and in memory of three Chicago pioneer surgeons, Drs. John B. Murphy, Christian Fenger, and Nicholas Senn.

Dr. Karl A. Meyer of Chicago and Dr. W. Wayne Babcock of Philadelphia have been named honorary chairmen of the congress, and Dr. Alexander Brunswick of New York has been chosen general chairman. Dr. Peter A. Rosi of Chicago is chairman of the program committee.

Surgical specialties to be represented are: colo-proctologic, neurologic, obstetric and gynecologic, ophthalmologic, otorhinolaryngologic, orthopedic, plastic and reconstructive, trauma and rehabilitation, and urologic. There also will be surgical motion picture reports on advances in military medicine, and a surgical nurses' program.

Dr. Edward L. Compere of Chicago is president of the United States Section and secretary of the North American Federation, and Dr. Ross T. McIntire of Chicago is executive director of the College.

Surgeons desiring to present papers should write to Dr. Peter A. Rosi, International College of Surgeons, 1516 Lake Shore Drive, Chicago 10. For hotel reservations, write to the reservation secretary, care of the college.

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Am. Rhinologic Society to hold meeting in Chicago

The American Rhinologic Society will hold its fifth annual meeting in the Belmont Hotel, Chicago, October 10. Dr. Kenneth H. Hinderer, Pittsburgh, president of the society, will preside. This will be preceded by a surgical seminar in the Illinois Masonic Hospital, October 7-9.

A symposium on "Objective Tests for Nasal

Function" will be presented in the morning at the hotel meeting. The panelists will be Drs. Juergen Tonndorf, Paul M. Seeborn, and William K. Hamilton of Iowa City; Herman J. Sternstein of Boston; and Raymond L. Hilsinger of Cincinnati. The discussants will be Drs. Maurice H. Cottle of Chicago, founder of the Society; David Cugell, also of Chicago, and Henry L. Williams of Rochester, Minn.

Five papers on various aspects of nasal surgery will be presented in the afternoon. In the evening, there will be the first official showing of a color sound film entitled "The Human Nose."

The clinical program at the hospital will consist of lectures, surgical demonstrations, panels, clinical reports with case presentations, and review of patients.

For information, write to Dr. Robert M. Hansen, secretary, 1735 North Wheeler Avenue, Portland 12, Ore.

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Awards for O. & G. work

District VI of the American College of Obstetricians and Gynecologists—comprising Illinois, Iowa, Minnesota, Nebraska, Wisconsin, North and South Dakota, Manitoba, and Saskatchewan—is offering \$100 and \$50 awards for the best original investigative or clinical work in obstetrics and like awards in the field of gynecology. Deadline for copy is August 1.

For information, write to Dr. Roger D. Kemper, Mayo Foundation, Rochester, Minn.

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P. G. course in skin problems

The Institute of Industrial Health of the University of Cincinnati announced an instruction course in occupational skin problems, October 26-30. The program will consist of morning lectures and clinical demonstrations, afternoon field instruction in industrial plants, and evening panels.

For information, write to the Institute of

Industrial Health, Kettering Laboratory, Eden and Bethesda Avenues, Cincinnati 19.

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Symposium on early cancer detection to be presented

The American Cancer Society will present a symposium on "Evaluation of Early Diagnosis of Cancer" at the Biltmore Hotel, New York, October 26-27.

The program will cover precancerous lesions and how to treat them; the value of periodic examinations in detection; the value of staging and proper reporting; the economics of cancer detection; and the question whether periodical examinations of well persons increase longevity.

Attendance by members of the American Academy of General Practice carries 12 hours of category II credit.

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Urological essay prizes

The American Urological Association is offering three prizes—\$500, \$300, and \$200, respectively—for essays on the result of clinical or laboratory research in urology. The contest is limited to urologists who have been graduated not more than 10 years, and to interns and residents doing research in urology.

For information, write to the association, 1120 North Charles Street, Baltimore 1.

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Meeting on ultrasonics

The American Institute of Ultrasonics in Medicine will hold its annual meeting Sept. 2, at the Leamington Hotel, Minneapolis. The guest speaker will be Dr. Russell Meyers, professor of surgery and chairman, division of neurosurgery, State University of Iowa Hospitals and College of Medicine, who will discuss "The Potentials of Ultrasonics in General Surgery and Surgical Specialities."

For further information write Dr. John H. Aldes, secretary, 4833 Fountain Avenue, Los Angeles 29.

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For the wastebasket?

How about you? What's your reaction when you open an envelope from one of your M.D. compatriots (on his professional stationery) and find, instead of a consultation report, a mimeographed plug for Senator Blowhard or Governor Goosebrain? My own reaction is one of disgust and anger. Disgust that the doctor would use his professional standing, time, and money to do part time "politiking" and anger at myself for being sucked into opening what I would ordinarily consider throw-away literature. I do look at throw-away literature, because usually it is honestly labeled and sometimes interesting and

informative as well. In this case I also looked at the literature but with more antagonism than support for the public servants mentioned. And the round file was still the ultimate recipient.

Were my disgust and anger justified? I'm not sure, now that I've thought it over. Why shouldn't doctors do some "politiking" along with lawyers, barbers, and morticians? Doctors have always been asked and encouraged to take part in community life. They may be elected officers of local service clubs, give talks to PTA groups, serve on committees. And in those positions, controversial subjects do arise, with occasional heated debates. *Editorial. So Mad I Could Spit! Rocky Mountain M.J. Apr. 1959.*

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Stone obstruction

Impacted gallstone as a cause of intestinal obstruction is relatively uncommon. Various authors report the incidence from 0.4 to 3.5 per cent of all cases of intestinal obstruction. Recurrent gallstone ileus requiring repeated ileotomy is even more rare. Sex incidence is approximately fifteen to one in favor of the female. The symptoms of gallstone ileus are similar to mechanical obstruction of the intestine due to any cause: crampy abdominal pain, nausea, vomiting, and abdominal distension being the most common. Diagnosis is often quite difficult

prior to operation, but it can be made sometimes by X-ray visualization of the obstructing gallstone.

As in any case of intestinal obstruction, early relief of the obstruction is important. Most authors believe that simple enterotomy, removal of the stone, and then primary closure of the enterotomy are all that will be necessary. Then, subsequent elective cholecystectomy and closure of the cholecyst-enteral fistula at a later time should be done. *Irving A. Ratner, M.D. Recurrent Gallstone Ileus. Report of A Case. J. Maine M.A. May 1959.*

THE P. R. PAGE

John A. Mirt



ISMS stand on aged praised

The House of Delegates of the Illinois State Medical Society, at its last annual meeting, passed a resolution concerning health insurance for those over 65. If implemented, this will be a big boost for medicine from a public relations standpoint.

The resolution provided that "the physicians of Illinois be polled whether they would be willing to participate in a special plan, which the Illinois Blue Shield can be directed to prepare, to provide low cost insurance for persons over 65 years of age with modest incomes."

Modest income was interpreted to mean not more than \$3,000 annually for a couple or \$2,000 for an individual, with a net worth under \$20,000. Eligibility would be determined by Blue Shield. Payments to physicians would be accepted as full payment.

This action was widely publicized in the press. The Chicago Sun-Times also devoted its lead editorial in a Sunday edition to "Medical Care for the Aged." It said, in part:

"In seeking to provide cheaper medical care for low income elderly people, the Illinois State Medical Society is acting in the best interests of everybody concerned.

"Physicians throughout the country are now realizing, as does the Illinois Society, that the greatest pressure for socialized medicine is likely to build up among the elderly if they are de-

prived of adequate medical care because of doctor and hospital bills beyond their means."

The editorial, in discussing the proposal of the House of Delegates, pointed out the steps being taken by the medical profession in other parts of the country to meet the problem. It concluded:

"With more and more people living longer lives, there is a growing necessity to take care of their needs without imposing an intolerable financial hardship on them. The Illinois Medical Society is to be commended for trying to ease the burden of the aged."

In order to make this proposal effective in any particular county, it will be necessary for at least 50 per cent of physicians in that county to accept reduced fees from those enrolled under such a plan. Fortunately, there is considerable sentiment in that direction. In Lake County, a resolution to accept lower payments was approved by a vote of 129 to 14.

Since most physicians, without any announcement, already treat many elderly patients in the low income bracket at reduced rates, an open acceptance of such a plan would not impose too heavy a sacrifice on their part. On the other hand, it would help to convince the public that physicians are not the money grabbers they are reported to be.

Attorneys entertain with skit

Those attending the Public Relations Dinner,

May 19, during the annual meeting of the Illinois State Medical Society—and the turnout was the largest we have ever had—were treated to something unusual that was both entertaining and thought provoking.

Attorney John J. Riordan and a group of practicing trial counsel in Chicago who are active in the Medico-Legal Relations Committee of the Chicago Bar Association and other related bar affairs presented a skit call “Rx for a Common Code.”

The play was a bird’s-eye view of the trials and tribulations of a mythical medical team “Cuttem, Slicem, and Shotz” and their legal counterparts, “Whoop, Holler, and Yelle.” It illustrated the pitfalls, cul de sacs and “just plain cussedness” that can be eliminated through mutual co-operation between the legal and medical professions.

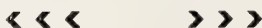
Laugh promoting from start to finish, the skit gave physicians involved as witnesses and lawyers serving as counsel in damage claim cases a better understanding of the problems of both professions. It is not surprising, therefore, that

Mr. Riordan has had a number of requests from both bar and medical groups relative to the possibility of presenting this play on future dates.

Besides Mr. Riordan, who directed the skit and served as chairman, the attorneys who took part were: Warren Hickey, Ezra D’Isa, Richard French, Arthur Connelly, Elmer Slovacek, Joseph S. Lafferty, John Roddy, F. Patrick Conlon, and John Gobel. Office aides who took the female roles were: Carol Baumeister, Dolores Rothenberger, and Donna DeVere. The skit was written by Attorneys Slovacek, Riordan, and Gobel. Frank Rago was musical director; Redmond Peters designed the scenery.

The dinner was arranged by the Committee on Medical Service and Public Relations of the Illinois State Medical Society. Dr. Leo P. A. Sweeney, chairman of the Chicago Medical Society’s Medico-Legal Committee, and Mr. John W. Neal, counsel for ISMS, handled the arrangements with the attorneys for the skit.

To them and to Mr. Riordan and his associates, the ISMS is indebted for an entertaining and instructive program.

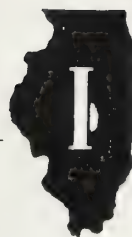


A real challenge

No one can say that treating an adolescent is not challenging or difficult or rewarding or frustrating or irritating. It is always interesting

and requires a flexibility of technique as well as a supple, well enlightened personality applying the techniques. The therapist’s tolerance for frustration must be high indeed! *Joseph D. Teicher, M.D. Psychotherapy of Adolescents. California Med. Jan. 1959.*

AT THE EDITOR'S DESK



RACK JOBBERS

Times have changed. Companies that sold patent medicine in the past now own ethical drug firms and vice versa, and drug stores have become department stores, selling girdles and toys along with sandwiches and cokes. Conversely, supermarkets and other food stores sell more than half of all the leading proprietary drugs and utility cosmetic products. These figures do not include the health and beauty aids sold by drug stores and in the drug department of variety stores and house-to-house distributors.

One-half of all the drug toiletry volume in the nation's food stores is handled through rack jobbers. The racks display dentifrices, baby powders, shampoos, vitamins, chest rubs, cold tablets, deodorants, laxatives, and many other products. This method of merchandizing has expanded; rack jobbers now handle \$572 million in drugs and cosmetics at retail value.

POLIO VACCINE

Paralytic polio is still with us. Twice as many cases were reported during the first four months of 1959 as during the same period last year. In addition, there was a 45 per cent increase in paralytic polio in 1958 over 1957. The polio peak is only a month away. Stress immunization.

SPOOKY FOODS

The spooky food industry is doing a \$250,000 yearly business, according to Diet Treasury. The

industry caters to gourmet shops and concentrates on fried ants, silkworms, Zaza insects, agave worms, fried baby bees, muskrat, and whole baby octopus. Except for the worms, which for years have been served at exclusive bars in Mexico, most of these delicacies originate in Japan.

To be in the swim today's hostesses of refined taste must stock their pantry shelves with jars of roostercombs in jelly, cockles and mussels, tender cactus pieces, squid in its own ink, chocolate covered grasshoppers, and seaweed powder to season vegetable soup or brew seaweed tea.

If this keeps up we may need to determine the caloric value of these products to encourage their consumption in our well planned diets.

THE DEATH OF THE HOUSEHOLD MOSQUITO

The Public Health Service is investigating a new method of killing the household mosquito. It consists simply of putting an unopened bag of insecticide in a room during the summer season. The fumes from the closed bag escape into the air even though the paper bag has a polyethylene liner. The most effective of the chemicals tested were malathion and DDVP, used in combination or separately.

MANUAL COMMUNICATION

Arthur S. Flemming, Secretary of Health, Education, and Welfare, made the following announcement at a recent conference:

"I have just learned, with great satisfaction

and some amazement, that a system has been worked out by which anyone can learn—in a matter of moments—to communicate with persons who are totally deaf and totally blind.

“The new method is quite simple, and its great virtue lies in that fact. It consists merely of tracing block letters, one on top of another, on the palm of the deaf-blind person’s hand.

“Learning to ‘talk,’ in this way, to the deaf-blind, is very easy. Most of the letters need only one or two strokes—only the letter ‘E’ has as many as four. The system is not only as easy as ABC, it is just about as foolproof.”

SOVIET HEALTH PROGRAMS

A mission of five American public health physicians who visited the Soviet Union late in 1957 under an exchange program found that the Communists have concentrated on quantity rather than quality. They pointed out, however, that “certain ingredients in the Red political system and in their ability to accomplish mass transfer of brain and brawn from one field of endeavor to another could permit astonishingly rapid change-over and developments in medicine.”

The Soviet health program is geared to the needs of the state in much the same way as it is in other countries. Their system stresses the importance of a healthy working class in achieving its major goals. The majority of practicing physicians are women. They have no choice of where they are to practice and no choice of patients and vice versa. Medicine is considered an important but not a primary contributor to the Soviet Union’s economy, which is why it is free. The average physician does not enjoy the same status as a Soviet engineer. More new physicians are graduated annually than in the United States but the quality of basic training is at a much lower level. They lack the kind of clerical and office equipment found over here. Health departments co-operate in city planning from the standpoint of sanitation and health facilities.

PHARMACEUTICALS

Soropon Liquid Pediatric is Purdue Frederick’s new product to curb cradle cap. The solution combines surface-active Cerapon-C and tyrothrycin in an aqueous miscible propylene glycol. Dr. George Bialkin, New York, reports his results on a study of 47 infants suffering

from varying degrees of seborrhea capitis with concomitant skin disorders. The drug was effective and maintenance therapy successful.

Madribon (sulfadimethoxine), Roche Laboratories’ newest member of the sulfa family, has been found highly effective against various upper respiratory and urinary tract infections in both children and adults. Due to its broad spectrum activity and safety, the drug has proved valuable in the treatment of acne and other soft tissue infections. Sulfadimethoxine has the qualities of rapid absorption and high concentration in the blood stream, coupled with good solubility of its principal excretory product, thus eliminating the possibility of kidney blockage.

AMERICAN TRUDEAU SOCIETY SYMPOSIUM

A promising new blood test for active tuberculosis was announced recently by Drs. Robert C. Parlett and Guy P. Youmans, at the American Trudeau Society’s annual meeting.

The test is a simple one. An antigen, a product of the tubercle bacillus, is incorporated in agar and allowed to jell in a small test tube. Clear agar is pipetted into the tube, which is then filled with serum from a patient. If the patient has tuberculosis, the antibodies will work down through the clear agar as the antigen works up from the bottom. When antigen meets antibody, precipitation occurs, detectable by a cloudy ring.

Clinical studies were encouraging. Eighty-five per cent of 1,652 samples of serum were positive in patients with bacteriologically proved tuberculous disease. False positives were obtained in only two per cent. Studies at the Suburban Cook County Tuberculosis Hospital-Sanitarium were reported also by Dr. William Lester. He obtained positive results in 123 of 129 patients with bacteriologically confirmed tuberculosis.

E. Cuyler Hammond, Sc.D. spoke at the same meeting. He gave the latest statistics on his long term study on the relationship between smoking and lung cancer.

“Death rates from lung cancer are extremely low among nonsmokers and rise rapidly with the amount of cigarette smoking. Lung cancer death rates are roughly 10 times as high among cigarette smokers as among nonsmokers. The ratio is far greater than this for heavy cigarette smokers. Hammond and Horn found far less association between cigarette smoking and bronchogenic adenocarcinoma than between cigarette smoking

and bronchogenic carcinoma of other types. Considering only well verified cases of bronchogenic carcinoma exclusive of adenocarcinoma, the death rate of two-pack-or-more-a-day cigarette smokers was roughly 60 times as high as the death rate of nonsmokers."

Statistical evidence may not be as convincing as that based on Koch's postulates or the double blind method. On the other hand, Hammond's results have been consistent and are getting more convincing.

Smoking is a difficult habit to overcome as many physicians have discovered. The M.D. smoker may refuse to accept Hammond's evidence to save face when the problem is discussed with patients.

THE DENTAL PROFESSION

The practice of dentistry is changing because the profession is reaping the benefits of its research. Dr. F. A. Arnold, Jr., director of the National Institute of Dental Research, Bethesda,

made this point in the June centennial issue of the J.A.D.A. This means that instead of filling cavities produced by dental caries, dentists will concentrate during the next century on problems of periodontal disease in middle and later life.

Dr. Richard L. Hoffman, of the University of Illinois College of Dentistry, predicts tooth banks in the future. Tooth buds and almost fully developed teeth have been transplanted successfully in hamsters. In rats, the transplant takes when placed under the gums and under the skin on the back, but not when implanted directly into tooth sockets.

The ADA is 100 years old. A dental educator predicts that the dentist of the future will have to operate with more than his own two hands to meet the increasing demands for his service. He will need well trained auxiliaries such as the hygienists, a dental assistant, and the dental laboratory technician. It is a problem in dental man power, which is not being developed rapidly enough to meet mounting needs.

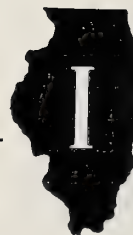


Unusual syncope

Syncope occurring during or after urination encountered in seven men is described. The initial episodes usually occurred when the patients were young, and attacks were infrequent. Syncope occurred after the patients had been lying down before arising to urinate. It is believed

that syncope results from the circulation effects of Valsalva's maneuver performed while the patient is urinating, at a time when the venous return to the heart and the peripheral arterial resistance are low. *William L. Proudfit, M.D. and Mario Enrique Forteza, M.D. Micturition Syncope. New England J. Med. Feb. 12, 1959.*

NEWS of the STATE



COOK

NEW OFFICERS. Dr. T. R. Van Dellen was named president elect of the Chicago Medical Society. Dr. George C. Turner was installed as president for 1959-60 at a June meeting to succeed Dr. Edwin F. Hirsch. Dr. Patrick H. McNulty was re-elected secretary.

CHICAGO MEDICAL GROUPS. At the May meeting of the Chicago Neurological Society, Dr. John J. Madden gave the Presidential Address; Dr. Jack P. Whisnant spoke on "Experimental Cerebral Infarction and Anticoagulant Therapy;" and Drs. Louis Boshes and Bertran Levin discussed "Clinical and Roentgenological Manifestations of Neurofibromatosis."

New officers for Chicago Neurological Society are Drs. Meyer Brown, president; Vladimir G. Urse, vice president; Ernst Haase, secretary; and John J. Madden, Councilor.

At the annual meeting of the German Medical Society of Chicago the following officers were elected: Drs. H. L. Widenhorn, president; Robert A. Hess, vice president; Edward V. Stalzer, treasurer; and Eugene F. Lutterbeck, secretary.

At the annual dinner of the Chicago Society of Internal Medicine held in May, Dr. Edward L. Turner, director, division of scientific activities, AMA, spoke on "Trends and Developments in the American Medical Association."

Officers for the sixtieth season (1950-60) of the Chicago Surgical Society elected in May are:

Drs. John L. Keeley, president; John V. Prohaska, vice president; Robert L. Schmitz, secretary; and Burton C. Kilbourne, treasurer.

NEW POSTS. Dr. Karl S. Klicka, former director of Presbyterian-St Luke's Hospital, has been appointed executive director of the Hospital Planning Council for Metropolitan Chicago. He succeeds Dr. Vane H. Hoge who has joined the Washington staff of the American Hospital Association.

Dr. Paul C. Bucy, brain surgeon of Chicago Wesley Memorial Hospital and Northwestern University Medical School was elected president of the Society of Neurological Surgeons. Dr. Eric Oldberg, University of Illinois College of Medicine is vice president, and Dr. Harold Voris, Stritch School of Medicine of Loyola University was elected to active membership. The society has 50 members and is the world's oldest neurological surgery organization.

Dr. George E. Miller, formerly director of house staff education at Buffalo General Hospital and associate professor of medicine at the University of Buffalo School of Medicine, is now director elect of research in medical education at the University of Illinois College of Medicine. He will develop and administer a two year pilot study of the process of educating a medical student, working under a grant of \$112,000 from the Commonwealth fund.

Dr. George B. Cahill has been appointed chairman of Mercy Hospital's department of radi-



This beautiful colonial building houses The Wayside Press. The Wayside Press has printed our Journal for many years. Located in Mendota, Illinois, the company prints more than 35 publications and employs about 250 workers. The main floor lobby is done in the Williamsburg style, and features an antique Washington handpress. Visitors are welcome. The building was completed earlier this year.

ology. He has been associated with its previous chairman, the late Dr. Warren W. Furey, since September 1944.

Dr. Emil D. W. Hauser, is president of the medical staff of Passavant Memorial Hospital, succeeding Dr. Clifford J. Barborka in that post.

EUROPE. Dr. Lowell T. Coggeshall, dean of the division of biological sciences at the University of Chicago, attended a meeting of the World Health organizations in Geneva, Switzerland. Dr. Coggeshall was appointed United States alternate representative to the W.H.O. executive board last November.

Dr. William Angus, president of the St. Francis Hospital staff, Evanston, was notified that a scientific research paper written by him would be read at the Ninth International Congress of Radiology, held in Munich, Germany this summer. The paper deals with methods of reading X-ray films which heretofore had not been considered perfect enough for diagnosis.

HOSPITAL NEWS. Mount Sinai Hospital, the only kosher hospital in Chicago, held a series of

40th anniversary celebrations. Although nonsectarian, Mount Sinai was founded by Morris Kurtzon to provide hospital facilities for orthodox Jewish people where they could abide by the dietary laws of their religion. Drs. Ben W. Lichtenstein, president of the medical staff; John J. Sheinin, president of the Chicago Medical School; and Howard F. Wallach, president of the Mount Sinai Medical Research Foundation were among the participants in the opening celebration.

Dr. Vladimir G. Urse, medical director and superintendent, Mental Health Clinic, Cook County Hospital, spoke on "Medicolegal Aspects Concerning Psychiatric Patients," at the June meeting of the Forest Hospital.

MEETING. Dr. John Prohaska, professor of surgery, University of Chicago spoke to members of Ileostomists, Inc. of Chicago on "What Is an Ileostomy?"

DEKALB

MEETING. Dr. Ben W. Lichtenstein, clinical

professor of neurology, University of Illinois College of Medicine, spoke on "The Diagnosis and Management of Strokes," at the May meeting of the DeKalb County Medical Society.

LASALLE

MEETING. Dr. Dexter Nelson, Princeton, spoke on "The Cardiac Patient," at the June meeting of the LaSalle County Medical Society.

ST. CLAIR

MEETING. The St. Clair County Medical Society had a picnic meeting in June.

VERMILION

MEETING. The annual play day meeting in June was at the Hubbard Trail Country Club, Rossville. Following dinner, the Vermilion County Medical Society held its business meeting.

GENERAL

ILLINOIS POISON CONTROL CENTERS.—The following are the Poison Control Centers in Chicago:

Bob Roberts Hospital, Midway 3-0800—ext. 2744

*Mercy Hospital, Victory 2-4700 or Victory 2-7735—ext. 10

Illinois Research Hospital, Monroe 6-3900—ext. 8153 or 291

Mount Sinai Hospital, Crawford 7-4000—ext. 89

St. Lukes Hospital, Harrison 7-5000—ext. 40

Michael Reese, Calumet 5-5533—ext. 2153

Children's Hospital (Memorial), Diversey 8-4040

Resurrection, Rodney 3-8000

Little Company of Mary, Hiltop 5-6000

The following Poison Control Centers are located in the state outside of Chicago:

St. Charles Hospital, 400 New York St., Aurora, Ill., Phone 8714

MacNeal Memorial Hospital, 3429 S. Oak Park Ave., Berwyn, Ill., Gu 4-2211

Mennonite Hospital, 807 N. Main St., Bloomington, Ill., Phone 3824-1

St. Joseph Hospital, 724 W. Jackson St., Bloomington, Ill., Phone 4328-1

St. Mary's Hospital, 2020 Cedar St., Cairo, Ill., Phone 2400

Graham Hospital Association, 210 W. Walnut, Canton, Ill.

Burnham City Hospital, Champaign, Ill.

Lakeview Hospital, 812 N. Logan Ave., Danville, Ill.

St. Elizabeth Hospital, 602 Green St., Danville, Ill. Phone 2-6300

*The most complete file index is available at this hospital for use on a 24 hour basis by physicians and hospitals in the Chicago area.

Decatur-Macon County Hospital, 2300 N. Edwards St., Decatur, Ill., Phone 8-4411

St. Mary's Hospital, 220 S. Webster St., Decatur, Ill., Phone 4326

St. Anthony's Hospital, 503 N. Maple St., Effingham, Ill., Phone 850

Community Hospital, 2026 Brown Ave., Evanston, Ill., University 4-9400

Evanston Hospital, 2650 Ridge, Evanston, Ill., Greenleaf 5-2500

St. Francis Hospital, 355 Ridge, Evanston, Ill., Davis 8-2200

St. Elizabeth Hospital, 2100 Madison, Granite City, Ill., Tr 6-2020

Ingalls Memorial Hospital, 155th St. & Page Ave., Harvey, Ill., Pilgrim 8-6080

Highland Park Hospital Foundation, 718 Glenview Ave., Highland Park, Ill., Idlewood 2-8000

Hinsdale Hospital, 120 N. Oak, Hinsdale, Ill., Faculty 3-2100

St. Joseph's Hospital, 372 N. Broadway, Joliet, Ill., Phone 6-5421

Silver Cross Hospital, 600 Walnut St., Joliet, Ill., Phone 6-6101

St. Mary's Hospital, 192 S. 5th Ave., Kankakee, Ill., Wells 3-4451

St. Mary's Hospital, 1015 O'Conner Ave., LaSalle, Ill. Conell Memorial Hospital, Cleveland & Stewart Ave., Libertyville, Ill., Phone 2-2900

Brokaw Hospital, Franklin Ave., Normal, Ill., Phone 3823-1

Richland Memorial Hospital, E. Locust St., Olney, Ill.

Ryburn Memorial Hospital, Ottawa, Ill., Phone 3100

Methodist Hospital, 211 Northeast Glenn Oak Ave., Peoria, Ill.

St. Francis Hospital, 530-616 N. Glenn Oak Ave., Peoria, Ill., Phone 6-6131

People's Hospital, 925 W. St., Peru, Ill., Capital 33300

Blessing Hospital, 1005 Broadway, Quincy, Ill., Baldwin 2-3270

St. Mary's Hospital, 1400 Broadway, Quincy, Ill., Baldwin 3-1200

Memorial Hospital, 1st and Miller St., Springfield, Ill., Phone 2-3361

St. John's Hospital, 701 E. Mason St., Springfield, Ill., Phone 2-6881

Carle Hospital, 602 W. University Ave., Urbana, Ill.

DEATHS

ROBERT DONALDSON BARCLAY, Brookfield, who graduated at Dearborn Medical College, Chicago, in 1904, died February 4, aged 88. For many years he was resident physician at the British Old Peoples' Home.

AUGUSTUS J. BLICKENSTAFF*, Peoria, who graduated at the State College of Physicians and Surgeons, Indianapolis, in 1907, died in St. Petersburg, Fla., February 11, aged 86. He was

*Indicates member of the Illinois State Medical Society.

a member of the American Academy of Ophthalmology and Otolaryngology, and a staff member of the Proctor Hospital.

CHARLES C. BUCZYNSKI*, Chicago, who graduated at Loyola University School of Medicine in 1929, died May 22, aged 55. He was commander of the Ft. Sheridan induction center in World War II. He was associated with the John Haas medical center, and was a staff physician at Loretto Hospital.

PRINCE WENDELL CAMERON, Chicago, who graduated at Illinois Medical College, Chicago, in 1911, died March 24, aged 80

EDMUND TURNER DOUGLAS*, Hillsboro, who graduated at St. Louis University School of Medicine in 1912, died in St. Luke's Hospital, St. Louis, February 9, aged 69. He was a member of the staff of the Hillsboro Hospital.

ARTHUR KNOWLTON DRAKE*, Toulon, who graduated at Harvard Medical School, Boston, in 1898, died in the Methodist Hospital, Peoria, February 20, aged 86. He had served as superintendent of the Elmgrove Sanatorium in Bushnell.

CECIL R. DRISKELL*, Springfield, who graduated at Humboldt Medical College, St. Louis, in 1906, died May 20, aged 75.

JAMES C. FASH*, Galesburg, who graduated at the University of Illinois College of Medicine in 1940, died May 12, aged 45. He was a member of the American Academy of General Practice.

LAFAYETTE GREEN, East St. Louis, who graduated at St. Louis College of Physicians and Surgeons in 1910, died January 22, aged 70. He served as chief deputy St. Clair County coroner from 1920 to 1928.

LOUIS CAMPBELL JOHNSTON, Sr.*, Chicago, who graduated at Northwestern University Medical School in 1911, died June 1, aged 71. He was a member of the staff of Grant Hospital,

and had practiced medicine in Chicago for 48 years.

GEORGE T. JORDAN, Vermillion, S. D., formerly of Chicago, who graduated at Northwestern University Medical School in 1905, died May 17, aged 83. He had been a member of the faculty of Loyola University School of Medicine, and had practiced medicine in Chicago for 40 years.

SAMUEL R. MAGILL*, Springfield, who graduated at Bennett Medical College, Chicago, in 1913, died April 4, aged 69.

PAUL E. ROSS*, Utica, who graduated at the University of Chicago School of Medicine in 1937, died April 13, aged 53.

CLAY O. MILLER*, Chicago, who graduated at the University of Illinois College of Medicine in 1926, died May 24, aged 61. He was assistant clinical professor of urology at Stritch School of Medicine of Loyola University, and chairman of the urology department, and a member of the board of directors at West Suburban Hospital.

ELMER EDWIN NYSTROM*, Peoria, who graduated at Northwestern University Medical School in 1909, died February 23, aged 74. He was associated with St. Francis and Methodist Hospitals, and was formerly vice-president of the Mississippi Valley Medical Society.

DWIGHT C. ORCUTT*, retired, Evanston, who graduated at the University of Illinois College of Medicine in 1901, died May 13, aged 86. He was a member of the staff of St. Luke's Hospital for 40 years.

ALBURT B. TROUPA*, Princeton, who graduated at Chicago College of Medicine and Surgery in 1917, died in April, aged 77.

JOSEPH H. WYNN*, Naperville, who graduated at the Chicago Medical School in 1931, died May 11, aged 60.

*Indicates member of the Illinois State Medical Society.

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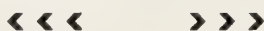
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Gastric carcinoma

Early study, effected by the means available to us at present — viz., radiographic, cytologic, endoscopic, and physical examinations — will not enable diagnostic efficacy to be substantially improved over that which now exists. Newer techniques than those currently employed must be developed in order to enhance the survival of patients with gastric carcinoma. Photofluorometric techniques have been employed in asymptomatic patients, but the discovery rate is so small, the economic aspects of this type of detection preclude its widespread use. However, in those patients with potential precursors of gastric carcinoma—i.e., achlorhydria, pernicious anemia,

atrophic gastritis, or a strong familial history of gastric carcinoma — routine screening has been extremely productive. The possibility of serologic techniques being applied to the diagnosis of cancer, particularly gastric, is feasible, but practical applications are not now available.

Reported improvements in five year survivals, attributed specifically to more radical resection, are unlikely to be enhanced beyond peak values of approximately 25 per cent. Nevertheless, at present surgery remains the only chance of prolonging survival. *Major George B. Hamilton, M.C., and Major Kevin Barry, M.C. Gastric Carcinoma — A Study of 179 Cases. M. Ann. District of Columbia April 1959.*



Viral combinations

At times poliomyelitis may be a complex infection, and the occurrence of paralysis or its severity may represent the summation of injuries inflicted by two independent agents. To what extent this applies to human infection is difficult to determine and still uncertain. There is no doubt that the polioviruses can and probably usually do cause paralysis in susceptible subjects without aid from other viruses. Whether Coxsackie viruses alone can produce paralysis has hitherto been denied or seriously doubted, but some suggestive evidence has been obtained that certain strains may do so. It seems likely now that these constitute at most a small fraction of all paralytic cases. Evidence of a synergistic action in man is largely epidemiological and still inconclusive, although highly suggestive. As

Dalldorf has pointed out, this raises some doubt as to the complete safety of vaccination on a large scale with attenuated living poliovirus in the presence of epidemics of Coxsackie infection. Thus far, however, there have been no published observations of human paralytic infections under circumstances that would verify this suspicion. Recent observations do show that the three major groups of enteric viruses — polio, Coxsackie, and ECHO — are not so sharply delimited as has been assumed, and occasional strains of virus are found with characteristics intermediate between these groups. This work has opened up several new avenues for investigation which should further clarify the syndrome of poliomyelitis. *Paul W. Clough, M.D. Coxsackie Viruses as a Cause of Disease in Man. Ann. Int. Med. Apr. 1959.*

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Changing Concepts In the Use of Antibiotics In the Treatment of Surgical Infections

FRANK LAMONT MELENEY, M.D., D.Sc., MIAMI, FLORIDA

I have elected to review for you the changing aspects of the treatment of surgical infections that have occurred over the last 15 or 20 years. I mention these years advisedly, because 15 represents the period of our experience with the antibiotics and 20, our experience with the sulfonamides. It is well from time to time to look back over a period of years to measure progress and to see things in their proper perspective. If we are wise, we may be able to look into the future and see the goals toward which we are striving, what obstacles lie in the way, and to determine what effort is needed on our part to overcome the obstacles and reach the goals.

My experience goes back over the 20 years I have mentioned and 20 years before that, into the period when we were trying to perfect the minutiae of sterile technique,— the first principles of which were laid down by Pasteur and Lister when practically every operative wound

became infected and many patients died with overwhelming sepsis. Before their time the few patients who recovered, had a high enough resistance to outweigh the virulence of the contaminating organisms by the production of laudable pus.

By perfecting the minutiae of sterile technique during the early decades of this century, we gradually had brought down the incidence of postoperative infection in clean cases to what seemed to be an irreducible minimum of 2 per cent. Even so, the incidence of infection from operations in contaminated areas ranged from 20 to 30 per cent. Many patients with fulminating infections came to us for treatment and promptly died in spite of everything we could do for them. The arch enemies of the surgeon in those days were the hemolytic *Streptococcus*, the hemolytic *Staphylococcus aureus*, the gas gangrene group of organisms, and tetanus—to mention the causes of acute fulminating infections. Then there were the slowly wasting infections caused by the tubercle bacillus, the mycotic organisms, and the bacteria that frequently work in consort following perforation of the alimentary tract. It is true that if the patient did not die promptly, we were often able to save his life by a surgical procedure, but there still was a

Professor Emeritus of Clinical Surgery, Columbia University; Lecturer in Surgery, University of Miami School of Medicine.

Presented before General Assembly, as Annual Address in Surgery, 119th Annual Meeting, Illinois State Medical Society, May 20, 1959.

mortality of 70 to 80 per cent in staphylococcal and streptococcal septicemia and of 50 to 60 per cent in general peritonitis.

Ehrlich had had some measure of success with chemicals in the treatment of infectious diseases, specifically lues and trypanosomiasis. In 1915, he predicted a wide expansion of the field of chemotherapy. However, in that year he died and his followers, Hata, Kitasato, Neufeld, Browning, Colebrook, and Fleming, became discouraged with chemotherapy and predicted that no chemical would have any effect unless one could be found that would have more harmful effects on bacteria than on body cells and one that would act in the presence of body tissues and fluids. Mercurochrome®, gentian violet, and acriflavin each had its enthusiastic advocates, but these products failed to fulfill the first criterion; and Fleming showed that these and most other dyes inhibited the protective action of the polymorphonuclear leucocytes.

Every bacteriologist of note spent some years of study on the hemolytic *Streptococcus* and numerous attempts were made to obtain protective sera in animals. Although certain antitoxins could be produced for the hemolytic exotoxin, the sera failed to protect against the invasion of the organism. The same was true for the staphylococcus. Attempts were made to distinguish the many different antigenic types of both streptococci and staphylococci, with the hope of obtaining more potent protective sera. It was true that at least three distinct antigenic types of pneumococcus had been discovered and specific sera had been prepared which, when administered to the proper type of case, brought about a crisis similar to that which developed spontaneously when the antibodies reached a critical level and could be demonstrated in the patient's serum. One pharmaceutical house had prepared a large colony of rabbits specifically immunized to the three main types of pneumococcus. But it was found that neither animals nor man could produce any significant antibodies to either the hemolytic *Streptococcus* or the *Staphylococcus aureus*, and septic infections with these organisms followed a distinctive course, seldom yielding and then only after prolonged treatment with multiple surgical procedures.

The Sulfonamides

I have said that many of Ehrlich's pupils and

followers became discouraged with the potentialities of chemotherapy, particularly with the dyes, but one persisted in his search. Finally he, Domagk, in 1935 found what everyone had been looking for—an agent that would kill the hemolytic *Streptococcus*, when injected into the body, without injuring body tissues. That drug was an azo dye, prontosil. The Trefouels discovered that the active principle was not the dye itself but a colorless substance called sulfanilamide. With this agent, Leonard Colebrook at Queen Charlotte's Hospital in London significantly reduced mortality and morbidity in puerperal fever. Colebrook's claims were modest, but as soon as he made his report, those who came after him accepted the benefits of his discovery. Soon sulfanilamide was being used widely and indiscriminately. It was not uncommon to hear a physician say, "I didn't know what was the matter with the patient, so I gave him sulfanilamide." Often, the illness was not an infection at all.

The one thing sulfanilamide did was practically to wipe out mortality from hemolytic streptococcal infections. Septicemia from that organism disappeared from hospital wards and even the previously invariably fatal streptococcal meningitis yielded to sulfanilamide. Derivatives of sulfanilamide proved to be less toxic and more effective against the pneumococcus than the parent drug, and thus sulfapyridine and sulfadiazine replaced the specific pneumococcus sera and rendered the large colony of immunized rabbits useless. But the staphylococcus failed to yield. Staphylococcal septicemia developed in the face of sulfonamide therapy and killed almost as frequently as before. Then, for a brief period, bacteriophage played an important and successful role in the treatment of staphylococcal septicemia, but this in turn was displaced by penicillin as the agent of choice for staphylococcal infections.

When, in 1940, it was thought that World War II inevitably would involve our country, the Surgeons General of the Army, Navy, and Public Health Service appealed to the National Research Council for advice regarding this spreading field of chemotherapy. They wanted to know what might be expected of the sulfonamides in the service training camps and at the front for such diseases as venereal disorders, respiratory infections, tropical diseases as well as in burns and in gunshot and shrapnel wounds. The Na-

tional Research Council responded by setting up a "Committee on Chemotherapy and Other Agents." It was soon evident that to mobilize medical research for the war effort, many other phases of war medicine would have to be studied. Four subcommittees were set up to study the sulfonamides in various fields of importance and within a year from the time of initiating the plan, the limitations as well as the indications for the use of the sulfonamides had become pretty well established. If given early in the course of the disease, they were found effective against hemolytic streptococcal infections, but were less effective after tissue breakdown had occurred. They were generally of less benefit in surgical than in medical infections, because they were inactivated by the peptones and acids produced by tissue breakdown and often could not reach foci of infection. Whether given systemically or applied locally, they failed to reduce the incidence of infections in war wounds, although they minimized the spread of invasive infection through the blood stream.

Although a big step forward had been taken by the control of hemolytic streptococcal infections, further progress came to a standstill after the first five years. However, this success raised hopes that other antibacterial agents might be discovered, if the search could be intensified.

The Early Small Doses of Penicillin

The failure of the sulfonamides to measure up to expectations led Florey and his group at Oxford in 1939 to turn back to a discovery made a decade earlier by Fleming, who had found that penicillin produced by the mold, penicillium, could purify mixed cultures by eliminating the coccal elements. Fleming did not fully realize the significance of his discovery and the small quantity of penicillin produced by Florey and Chain and their associates was not enough to cure the first cases of staphylococcal sepsis treated clinically. The results indicated, however, the potentialities of penicillin if it could be produced successfully on a commercial scale. Greater production was not possible in Britain because of the strain put upon the British pharmaceutical houses during the early years of the war. So Florey came to this country and called for the help of our Office of Scientific Research and Development, which responded generously. The War Production Board, the Department of Agriculture, and 17 phar-

maceutical firms gave a splendid example of co-operation in the production of this new drug and it was not long before week by week reports indicated a gradually growing stockpile of penicillin available for clinical investigation. This was carried on in well controlled study groups at home and some was made available for a trial in the field among the Allied forces when the Normandy invasion began in 1944.

With limited quantities available, its clinical application by the study groups had to be controlled strictly. It could be used only against infections caused by susceptible organisms and the doses were limited to 5,000 units every three hours for a total of 40,000 units a day. I remember very well one of the early cases of *Staphylococcus aureus* septicemia with osteomyelitis of the ilium, a desperately sick boy, whose septicemia responded promptly to that small dose. However, the antibiotic was stopped too soon because of the limited supply. The infection recurred in the lungs, but quieted down with renewal of the therapy. When it again was stopped too soon, a second flare-up occurred with the appearance of an internal abscess on the inner surface of the ilium. This also subsided with a second renewal of treatment at 40,000 units a day. The response of those early cases of severe staphylococcal septicemia to small doses, was and always has been a marvel to me and it should not be forgotten in these days when we think nothing of giving 6 to 8 million units a day. I remember with what surprise I read in one of the early reports that Champ Lyons advocated as much as 200,000 units a day for severe staphylococcal infection.

Let us not forget that the first phase of the antibiotic era was solely with the use of penicillin and that in most cases, it accomplished the desired results in both staphylococcus and hemolytic streptococcus infections with amazingly small doses. But even small doses were expensive in those days—\$27 for 100,000 units, and it could not be wasted. So some cases did not get enough and some that needed it, did not get any. I remember visiting Dr. Alton Ochsner's Clinic in New Orleans during that period. A case was presented which should have been treated with penicillin, but the quota of penicillin for that month had been used up and none was available for that particular patient.

In those days, 97 or 98 per cent of all staphyl-

ococcal strains were susceptible to penicillin, but if the doses were small or treatment had to be stopped or curtailed before infection was controlled and all of the organisms killed, the more resistant individual cocci would survive and their progeny would pass on their resistance to their offspring. Thus resistant strains of the staphylococcus began to appear.

The Indiscriminate Use of Penicillin

With the rapidly increasing production of penicillin, the price decreased and it became available to everybody. Soon penicillin was being used for everything. No one bothered to determine the cause of any infection. Patients often came to physicians demanding penicillin shots which they got. The physician figured that if he didn't give it the patient would go to some one else who would. Thus a great many patients received penicillin who never should have had it and many of them became allergic to it. This was the second stage of the antibiotic era—the indiscriminate use of penicillin without laboratory check on the sensitivity of the organisms.

Meanwhile, the several units that had been set up to appraise the effect of penicillin in treating surgical infections combined their results, examined them critically, and correlated them with the bacteriological findings and the method of application. They found that penicillin was not a panacea but was successful in controlling surgical infections in about two-thirds of the cases treated.

The criteria for determining whether or not the antibiotic was of some use in controlling the infection rested upon affirmative answers to the following questions: (1) Did it obviate the necessity for a surgical operation? (2) Did it permit a limited or abbreviated surgical procedure? (3) Did it shorten healing time? (4) Did it permit primary closure of the wound after removal of or drainage of the infected focus? (5) Did it permit an earlier secondary closure than would have been expected without the use of the antibiotic? The results were considered excellent, if there was an immediate or prompt response with obvious control of the infection within 72 hours; good, if there was a definite but slower response; and questionable, if it was not certain whether the antibiotic had any effect. In the last category were cases in which the infection obviously failed to come under control.

When the 33 per cent of failures of penicillin treatment was analyzed, it was found that the majority were due to the fact that the causative organisms were not susceptible to penicillin. In other cases, secondary contaminants, particularly gram-negative rods, had the power of producing penicillinase, capable of inactivating penicillin and rendering it powerless against the causative organism. In some instances it was a matter of too little and too late. In some cases, necrotic tissue was left in situ, protecting the invading organism. No, penicillin was not a panacea, but great satisfaction was derived from the belief that the second arch enemy of the surgeon, the *Staphylococcus aureus*, had been conquered and the gas gangrene group of organisms had been brought under some measure of control. This success stimulated the search for other antibiotics that would make up for the limitations of penicillin. Particularly needed was an antibiotic effective against gram-negative rods and the tubercle bacillus.

Bacitracin

Bacitracin, discovered in 1943, was found to have a somewhat wider antibacterial spectrum than penicillin. It was not effective against the tubercle bacillus or the gram-negative rods, but it had some advantages over penicillin. It was not inactivated by penicillinase producers, making it more effective in mixed infections. Furthermore, it was not allergenic as was penicillin. This drawback to the use of penicillin was becoming increasingly important as cases of serious sensitivity reactions and even anaphylactic shock and death, began to mount.

Streptomycin

The soil bacteriologists, as exemplified by Waksman, now came to the fore. Antibiotics began to be discovered by the score in specimens of soil collected from all corners of the earth. Most of them were toxic and not suitable for clinical use, but the great abundance of soil organisms provided a field for research that proved to be both promising and productive. Out of this study came streptomycin, Aureomycin®, Terramycin®, Chloromycetin®, and erythromycin.

Streptomycin proved to be the one that had been sought for to attack the tubercle bacillus. To be sure, it had its limitations as to dosage

and duration of treatment because of its unique toxic action on the 8th cranial nerve. Furthermore, it had the peculiar property of permitting organisms to develop resistance rapidly—not only the gram-negative rods but the tubercle bacillus as well. The latter fault was overcome somewhat by combining it with para-aminosalicylic acid and/or isoniazid. Adding streptomycin to penicillin seemed to increase its potency, particularly in the control of subacute bacterial endocarditis. Thus it was demonstrated that in some combinations at least, there was a synergistic action.

The Indiscriminate Use of the Mycins

The mycins were found to be potent against many of the gram-negative rods as well as against the cocci and they came to be known as the broad spectrum antibiotics. However, they were found to be bacteriostatic rather than bactericidal hence less effective for surgical infections than for medical infections. This distinction is important when it comes to antibiotic therapy. Surgical infections are characterized by a local breakdown of tissue and an exudation of leucocytes into an abscess or into some body cavity, such as a joint, the pleura, the pericardium, or the peritoneum. The blood vessels in the periphery of an abscess are closed by blood clot, rendering it difficult for any antibiotic circulating in the blood to reach the highly concentrated mass of bacteria within the focus of infection. Furthermore, the organisms causing surgical infections are those against which the body is incapable of building up immunity, whereas those causing medical infections are antigenic. For that reason, bactericidal antibiotics are more important than bacteriostatic antibiotics in the treatment of surgical infections and less dependence is placed upon the protective action of the body tissues.

When bacitracin, Aureomycin, and Chloromycetin first became available, I was asked to take part in a symposium on antibiotics at Yale Medical School in New Haven. That meeting was in 1949. Dr. Woodward and Dr. Schoenbach, who spoke of the virtues of Chloromycetin and Aureomycin, respectively, did not consider sensitivity tests important or necessary, because the results of treatment often did not follow the *in vitro* test results. They advocated the use of these broad spectrum antibiotics without sensitivity

tests or even bacteriological cultures to determine the causative organisms. I strongly advocated basing treatment in surgical infections on the sensitivity tests, because many times I had found that failure to respond to treatment was due to the lack of sensitivity of the causative organism to the antibiotic chosen.

I concluded that this was a fundamental difference between medical and surgical infections. Medical infections are self-limiting and often will get well without or in spite of antibiotic treatment. They respond to many different antibiotics, so that it usually does not matter much which is used. With surgical infections, however, the causative organism often is susceptible to just one antibiotic and resistant to others. Medical infections usually are due to a single organism, while surgical infections tend to be polymicrobial. Here again, a single broad spectrum bacteriostatic antibiotic may be effective for the medical infection and be quite ineffective for the mixed surgical infection. Furthermore, medical infections frequently get well if the antibiotic reaches the area involved in dilute form through the blood stream. In surgical infections, particularly chronic ones, dead tissue often has to be removed before the antibiotic can reach the area of involvement. An abscess may be masked and overlooked and later flare up when the antibiotic has been discontinued. When incisions are made, an opportunity is given for local application of the antibiotic in high bactericidal concentration.

Many physicians went on the principle advocated by Schoenbach and Woodward, of using the broad spectrum antibiotics without bothering with cultures or sensitivity tests. If one failed, another was tried, then another and another. The expression, "I gave an adequate dose of terramycin, but the infection failed to respond, so I changed to Chloromycetin" was common. Certainly a dose is not adequate if it is not effective.

Thus we experienced the third stage of the antibiotic era—the indiscriminate use of the broad spectrum antibiotics without laboratory confirmation of the sensitivity of the causative organism. Some physicians still are working on this principle.

The Increasing Resistance of Organisms

All through the period of the widespread and indiscriminate use of penicillin followed by the

widespread and indiscriminate use of the broad spectrum antibiotics, the ubiquitous staphylococcus refused to be controlled. It had developed the unique capacity of becoming resistant to the antibiotics used against it. This phenomenon has been studied extensively but is not completely understood. It is known that in any given colony of bacteria some are more susceptible than others and that in any culture, mutant forms may develop in an effort to survive in a changing environment. The more susceptible forms are killed off, the resistant ones survive, and their progeny inherit the characteristic of resistance. This is repeated over and over as the organism goes from one patient to the next, with a gradual increase of resistance of the strain.

During the period when staphylococci were almost all susceptible to penicillin, surgeons grew careless in their sterile technique. They were less careful in scrubbing their hands and in preparing the patient's skin in the operative field. They became careless about masking the nose as well as the mouth in the operating room and at the time of dressings. Increased contamination of the operative wounds occurred. Surgeons became less careful of hemostasis and less gentle with the tissues. Consequently, the local environment became favorable for bacterial growth and the infection rate began to increase.

Now we are faced with a serious situation. The rampant staphylococcus is resistant to penicillin, streptomycin, and the tetracyclines, and the problem has reached major proportions both at home and abroad. This is not only a problem for surgeons, but for pediatricians, obstetricians, internists, hospital administrators, and public health officials.

In September of 1958 the United States Public Health Service, through its Communicable Disease Center in Atlanta, called a meeting to discuss the problem. The conference was composed of delegates representing 70 different organizations and societies and other interested individuals who attended voluntarily. Surgeon General L. E. Burney stressed the concern of the U. S. Public Health Service in the problem of hospital-acquired staphylococcal disease and the determination of this agency to study every phase of it from all possible angles by means of funds for research appropriated for that purpose by Congress. He called for the co-operation of all interested organizations and urged the con-

ference to recommend methods of study that would lead to the solution of the problem.

Dr. Robert Anderson, Chief of the Communicable Disease Center, USPHS, in Atlanta, described "The Emergence of the Hospital-Acquired Staphylococcal Disease Problem in the U. S." He stressed the probable association of the widespread use of antibiotics with the present problem and the development of resistance by staphylococci to the commonly used antibiotics. He suggested that strains of particularly high degrees of transmissibility and virulence have emerged from the great population of staphylococci under the impact of the antibiotics. Although there is a debate going on as to the relative importance of the carrier versus the environment in the transmission and maintenance of staphylococcal disease, evidence seems to indicate that both factors are important. Many administrative problems accompany control of either the carrier or the environment. He stated that it is "now apparent that there are very real and important community aspects to this problem. Organisms responsible for hospital infections are carried home by the discharged patient, transmitted to various members of the family . . . and are responsible for repeated familial outbreaks of suppurative disease."

Dr. Chester W. Howe, Associate Professor of Surgery at Boston University, read a paper on "Staphylococcal Disease on Surgical Services." He recalled the fact that "during the pre-antibiotic era, staphylococci were the most common wound pathogens." The next most common pathogenic organism formerly was the hemolytic *Streptococcus*. Because of the marked susceptibility of this organism to the sulfonamides and to penicillin, it no longer is of major importance numerically. However, the staphylococcus, having developed resistance to penicillin, streptomycin, and the tetracyclines, is coming into increasing importance in traumatic wounds and in burns.

Dr. Frederick Wentworth and his co-workers in the Department of Health in Columbus, Ohio, discussed the "Community Aspects of Hospital-Acquired Staphylococcal Disease." They stated that "it is now clear that the hospital with an uncontrolled staphylococcal disease problem may act as a focus of infection for the community itself." An epidemic often starts in a nursery, but the infant develops the first signs of disease

after discharge from the hospital and then produces a breast abscess in the mother. Then follows simultaneous or subsequent transmission to other members of the family. The authors, studying families of 26 infants infected with the epidemic strain 80/81 during a nursery outbreak, found that "during five months of observation about three-fourths of the mothers and one-third of the fathers and siblings were shown to be carrying the strain in their nasal pharynx on one or more occasions. Eleven of the 26 families were still infected at the end of the study." They reported one family that had an almost continuous history of staphylococcal infections for four years following an epidemic and another family for well over a year. In the circumstances it is difficult to eradicate the organisms from a family.

The conference accepted hospital-acquired staphylococcal disease as a serious problem of global scope and advised the establishment of hospital infections committees for the prevention and control of hospital-acquired infections. "The hospital infections committee should consist of active, interested members of all major hospital departments . . . and have complete administrative backing . . . The local health officer should be invited to be a consultant to the committee . . . The committee should regularly collect complete data on all infections acquired within the hospital" and make periodic reports to the medical staff and to the administrator. "The committee should sponsor an educational program for all hospital personnel, presenting current concepts in the proper prevention and control of hospital-acquired infections . . . Frequent and regular meetings of the committee are essential to maintain a high level of interest."

It is of great interest to me that the hemolytic *Staphylococcus aureus*, formerly the arch enemy of the surgeon, now has become a problem for all departments in the hospital. Does that mean that in becoming resistant to penicillin, streptomycin, and the tetracyclines, the organism has become more virulent? It may be so, but we have no concrete evidence to prove it. Infection depends on (1) the lowered resistance of the host, (2) the virulence of the invading organism, and (3) the dose of organisms involved. It may be that after a period of time in which staphylococcal infections were rare (because of the effectiveness of penicillin), people

lost some of their natural resistance to this organism. It also may be that with the general letdown of cleanliness precautions on the part of hospital personnel, including physicians, nurses, and ward attendants, the number of organisms falling into a wound has increased to the point where the natural defenses cannot cope with the invasion.

What must we do, as surgeons, to meet the situation? First, we must admit that it is a complicated problem with many ramifications and we must follow along every pathway that is connected with the main highway. We must get back to better operative technique particularly, gentleness with tissues, certainty of hemostasis, and avoidance of tissue tension. We must get back to better sterile technique, with a sterile sense to know when we have broken sterility and a sterile conscience to correct the break at once. We must give up the indiscriminate use of antibiotics, both prophylactically and actively, and apply them specifically when they are indicated. We must determine the sensitivity not only of the causative but the associated organisms and meet every one with the appropriate antibiotic.

The antibiotics used should be bactericidal and reach the organisms in high enough concentration to kill them outright. Organisms drop into a wound during an operation and are all on the surface for several hours. Locally applied bactericidal antibiotics will render them incapable of survival, if they are susceptible to the agents employed. A combination of bacitracin 1,000 units per cc. (2%) and neomycin (1%) will cover the floral spectrum of most wounds better than any other antibiotic combination, bacitracin for the gram-positives, neomycin for the gram-negatives, and both for resistant staphylococci. These antibiotics may be employed during and at the end of all clean operations on the heart and blood vessels, lungs, bones, joints, and the brain. If infection develops in such cases, it may nullify the whole purpose of the operation. Antibiotics should not be used prophylactically on other clean cases. In properly conducted operating rooms, the rate of wound infection in clean cases should not be over 2 per cent. For operations in contaminated areas, cultures should be taken of the field area—for example, the eye, ear, nose, mouth, the external genitalia—and the appropriate bactericidal antibiotic should be applied locally during and at the end

of operation before wound closure. In established infections the causative organism and all associated with it, must be cultured, purified, and tested for sensitivity and the most potent bactericidal antibiotic given, both locally and systemically.

Penicillin, streptomycin, and the tetracyclines are no longer the antibiotics of choice in staphylococcal infections. A choice is given among bacitracin, vancomycin, kanamycin, or ristocetin. Erythromycin is a borderline choice. It is bacteriostatic rather than bactericidal and many staphylococci are now resistant to it. Staphylococci rarely become resistant to bacitracin and the antibiotic is not allergenic. There need be no fear of nephrotoxicity from systemic bacitracin, if the precautions of administration and dosage are followed. The chief precaution is to see that the patient has an intake of 2,500 cc. of fluid daily, to dilute the bacitracin as it passes through the tubular epithelium of the kidneys. Vancomycin, kanamycin, and ristocetin have demonstrated their ability to control invasive staphylococcal infection, each one having its special limitations. More experience is needed with these three agents to determine their indications and limitations and the development of bacterial resistance to them.

The indiscriminate use of penicillin, streptomycin, and the tetracyclines also has brought some of the gram-negative rods from obscurity to relative importance. Of these organisms the most important are the proteus, pseudomonas, and aerobacter groups. It is true that they are for the most part surface infectors and not invaders, so that usually they can be met and controlled by the local application of the most potent bactericidal antibiotic. Neomycin (1%) is the most potent against proteus and polymyxin B (0.1%) against the pseudomonas group. Neomycin is not only nephrotoxic but neurotoxic and should be used systemically only when the proteus has become invasive and if it is the only potent antibiotic. Systemic polymyxin B is more nephrotoxic than bacitracin, but it may be used with caution as to dosage and duration of treatment. The author is at present helping to evaluate Colimycin®, which has shown potency against the pseudomonas group with very low toxicity.

Surgeons, surgical nurses, and ward attendants

should know whether or not they are carriers of staphylococci in their nose and throat. If so, they should attempt to limit and control the spread of these organisms by frequent washing of the hands and the avoidance of contact with other patients without the protection of masks, gloves, and in some cases, gowns. An attempt should be made to eliminate the organisms from the nose and throat or to reduce their number. This can be done by the frequent application of a spray containing bacitracin (1%) and neomycin (0.5%), attempting to reach all of the facial sinuses with the antibiotics. Carriers should always use disposable paper handkerchiefs instead of washable ones and should be ever conscious of the likelihood of spreading contamination around their environment.

How responsible is the hospital management and its board of directors for an infection that develops in a hospital? If a patient comes into the hospital expecting to spend four or five days for a goiter operation or eight or ten days for a hernia operation, and infection occurs and he is in the hospital two or three times as long because of the infection, should the hospital remit his bill for those extra days? Has the patient any ground for suit against the hospital or any of the individuals who took care of him during his hospital stay? These are questions I cannot answer, but they will have to be faced unless this problem of hospital infections is solved.

We are now in the fourth phase of the antibiotic era, when the intelligent and successful use of the antibiotics requires a knowledge of the sensitivity of the causative and associated organisms to the available bactericidal antibiotics and the careful application of those agents, both systemically and locally, in concentrations lethal to the bacteria and safe for the patient. We must be aware of all of the ramifications of the important problems of hospital infections.

SUMMARY

I have tried to discuss the changing concepts of the treatment of surgical infections from the time when we were faced with serious invasive infections due to the hemolytic *Streptococcus*, the hemolytic *Staphylococcus aureus*, the gas gangrene group of organisms, and the tubercle

bacillus; when we had only the natural defenses of the body and the scalpel to limit and control their activity. Then we went through the five year period when we had the assistance of the sulfonamides, and into and through the last 15 years, when we have had the more potent aid of the antibiotics. I have shown how these so-called adjuncts to surgery have modified some of the former principles of surgery and have stated the criteria by which we can evaluate the role played by the antibiotics. I have shown how treatment with the aid of the antibiotics has evolved through the phase of the small doses of penicillin, then the excessive doses of penicillin, and its indiscriminate use with the development of minor and major allergic reactions.

Next came the phase of the indiscriminate use of the broad spectrum antibiotics without the aid of laboratory sensitivity testing. I have stressed the difference between medical and surgical infections and the reasons for employing bactericidal rather than bacteriostatic antibiotics in the treatment of surgical infections. I have pointed out the value of the local application

of potent bactericidal antibiotics in surgical infections, to bring the antibacterial agent into close contact with the organisms in lethal concentration. I have described the resurgence of the staphylococcus as a major agent of infection and the growing menace of some of the gram-negative aerobic rods formerly of secondary importance. I have discussed briefly the responsibility of the hospital management in the control of hospital-acquired infection and the advisability of identifying carriers and limiting the spread of organisms by these carriers.

I have stressed the vital role of the laboratory and the tests for sensitivity of the organisms and the close co-operation required between the clinicians and the laboratory, so that the most potent antibiotics may be employed at the earliest possible time in the course of the infection, thus giving the patient the full benefit of our knowledge and reducing the time and expense of his hospital stay. Such effective treatment of individual cases will aid greatly in minimizing the spread of these organisms by carriers among hospital personnel throughout the hospital environment.



Incidence of thrombosis

One discouraging feature of many reports on the surgery of peripheral arteriosclerosis has been the relatively high incidence of the late thrombosis. At present, in a group of about 75 patients with peripheral arteriosclerosis bypassed by grafts, there have been about 25 per cent of late occlusions from four to 18 months after operation. Arteriography carried out on patients postoperatively, at regular intervals, demonstrates no evidence of plaque formation within the grafts. We have been able, however, to see the development of plaques in the arteries or proximal to the graft, especially in the areas where arterial clamps were placed across the artery.

It is felt that trauma to these sclerotic vessels has produced a more rapid progression of atheromatous formation in these areas than would otherwise have occurred. Therefore, technically it is vitally important to produce minimal trauma to sclerotic vessels if the grafts are to function for long periods of time. What is needed is a medical method of preventing further progression of arteriosclerosis after the placement of such grafts. Until such time as this is developed, occasional cases of late graft occlusion will continue to occur regardless of the type of graft used. *W. Sterling Edwards, M.D. Recent Advances in Arterial Surgery. Rhode Island M. J. May 1959.*

Acute Pancreatitis

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Although acute pancreatitis is a common entity, progress in diagnosis and treatment has not been as spectacular as in some other diseases.¹ Recently new diagnostic methods and approaches to treatment have been proposed.

Many of the problems related to pancreatic disease concern the relatively inaccessible location of the organ. Symptomatology of patients with pancreatitis may be so bizarre the disease is not recognized. Repeated attacks of pancreatitis in the same patient are not uncommon.^{1,2,3} Diagnosis of acute pancreatitis frequently is difficult; neither the physical examination nor radiologic study contribute greatly to its establishment.⁴ Although determination of the serum amylase level early in the course of the disease has been stressed in diagnosis,⁵ recent reports have pointed out the limitations of this test. The present report reviews the problem of acute pancreatitis and incorporates our experience with 22 patients seen at the VA Research Hospital during the period, 1953-1958.

Pathologic Aspects

There is interstitial edema in the early stage of acute pancreatitis. Frequently, this stage is so transient it may not be recognized. The characteristic findings in acute hemorrhagic pancreatitis include proteolytic destruction of the pancreatic parenchyma, necrosis of blood vessels with subsequent hemorrhage, necrosis of fat by

lypolytic enzymes, and the accompanying inflammatory reaction. If the patient survives the initial attack, the necrotic areas may be replaced by diffuse or focal fibrosis, calcification, and ductal dilatation. The gross alterations depend upon the stage of the disease. Subsequent to the initial changes due to edema, hemorrhagic areas may be noted. The most striking change, however, is subcutaneous fat necrosis involving not only the pancreas but adjacent tissues.

Etiological Factors and Pathogenesis

The etiological factors in pancreatic disease may be classified into the following categories: infectious, mechanical, vascular, metabolic, toxic, and traumatic.⁶ Infection is not an important factor in the majority of cases. The mechanical theory offers the best explanation for the pathogenesis of acute pancreatitis. Some patients have a common channel between the pancreatic duct and the common bile duct, and obstruction occurs secondarily to sphincter spasm, edema, fibrosis, tumor, or stone. In any event, the sequence of events and the pathogenesis of pancreatitis would appear to be the same—namely, pancreatic secretion, ductile obstruction, ductile hypertension, and ductile rupture with extravasation of pancreatic juice into the interstitial tissues, and autodigestion of the pancreas. Hypersecretion of pancreatic juice as a result of overeating or of alcoholism appears to be an important contributing factor.⁷

Although vascular factors may be important in the production of pancreatitis, their role in its initiation has not been established clearly. Trauma, although a relatively infrequent etiologic factor, is of great importance because of the seriousness of pancreatitis associated with abdominal trauma or following surgical exploration.

The pathogenesis of pancreatitis has been studied utilizing two approaches: 1) the study of factors operating in patients with acute pan-

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creatitis, and 2) the use of experimental animals for the study of the sequence of events in experimental pancreatitis.

Clinical Observations

Neither the age nor sex incidence has shed important light upon the pathogenesis of pancreatitis. Pancreatitis occurs in patients of all ages although it tends to be less common in children.⁸ The mean age of the patients at the VA Research Hospital was 39 years, with a range of 24 to 63 years. Other reports indicate a preponderance of the disease below the age of 50.^{1,9,10} When pancreatitis is associated with biliary tract disease, all age decades are affected more evenly.^{10,11} Acute pancreatitis appears with equal frequency in both sexes on the basis of clinical reports although autopsy statistics indicate it is 50 per cent more common in women than in men.¹

Excessive indulgence in alcohol appears to be the commonest predisposing factor. A history of significant alcoholism was obtained in 64 per cent of patients at the VA Research Hospital. The incidence of alcoholism in other reports ranges between 8.1 per cent⁹ to as high as 69 per cent.^{12,13}

The second important predisposing factor appears to be the presence of gall bladder disease. Gallstones or nonvisualization of the gall bladder was observed in 27 per cent of the patients at the VA Research Hospital. Other reports indicate that the incidence of gall bladder disease varies between 33 and 80 per cent.^{1,9,12,14,16} In the collected series of Fallis and Plain, gallstones were found in 367 of 667 patients.¹⁷

The relationship between lipid metabolism and acute pancreatitis is of interest. Lactescence of the serum, which is the result of hyperlipemia,¹⁸ in association with pancreatitis was observed in two of our patients. The hyperlipemia that accompanies the acute attack usually reverts to normal upon recovery.¹⁹ Pancreatitis also is more frequent in patients with essential hyperlipemia.²⁰ It has been suggested that the pancreatitis associated with pregnancy may be the result of hyperlipemia.^{21,22} Pancreatitis also is frequent in association with states of malnutrition such as kwashiorkor. Pancreatitis may follow vigorous re-feeding after a period of starvation.²³ The pancreas is particularly vulnerable to protein deficiency due to the large amount of protein re-

quired for pancreatic enzyme formation.^{24,25}

Experimental Observations: Pancreatitis may be produced experimentally by one of the following methods: (1) obstruction of the ducts, (2) impairment of blood supply, (3) as a result of mechanical or chemical trauma, (4) as a result of metabolic derangement, or (5) local anaphylaxis.⁶ None of the methods used for the production of experimental pancreatitis is entirely satisfactory and the etiologic agent or agents do not have the same weight as the corresponding factors in spontaneous acute pancreatitis.

Clinical Features

The major manifestations of acute pancreatitis are abdominal pain, nausea, vomiting, fever, and shock.

Abdominal Pain: The most frequent symptom of acute pancreatitis is abdominal pain. It was observed in all of our patients. The mean duration was four days. Its site frequently is epigastric and not infrequently pain radiates to the back. But the location varies, depending upon the area of the pancreas involved. Pain originating in the head of the pancreas is referred to the left upper quadrant of the abdomen.²⁶ Pancreatic pain tends to be severe and constant and frequently is not relieved by narcotics. Bending forward may relieve it somewhat and many patients will assume a characteristic position by drawing up their knees toward the chest.

Nausea and Vomiting: Nausea and vomiting are frequent manifestations of pancreatitis as a result of the disease or secondary to the associated gastritis, or because of the ileus accompanying pancreatitis.

Fever and Shock: Elevation of temperature occurred in half of the patients. Although the maximum was 106° F., the usual temperature elevation was in the neighborhood of 101°. Shock may be present to a variable degree, depending upon the severity of the illness. Shock is common in hemorrhagic pancreatitis and is a poor prognostic sign.^{11,13}

Physical Findings: Early in the course of the disease, only deep tenderness may be noted in the epigastrium. Abdominal distention is common, but there is little rigidity of the abdominal wall or rebound tenderness. The bowel sounds may be unchanged or reduced, depending upon whether adynamic ileus is present. Examination of the chest may reveal evidence of atelectasis or pleural

effusion; these findings were observed in nine per cent of our group of patients. A number of skin signs have been described in association with pancreatitis which are of historic significance only as they are late manifestations of the disease.²⁷ They were not observed in any of our patients.

Laboratory Findings

Serum Amylase: Serum amylase is reported to be elevated early in the course of acute pancreatitis although normal values usually are obtained after two to three days. The real value of the serum amylase diagnosis is difficult to ascertain for, in many of the reported series, elevation was used as a criterion for diagnosis of acute pancreatitis. Siler and Wulson reported that the serum amylase was elevated in 82 per cent of their series.⁹ In contrast, patients with fatal pancreatitis may have no significant elevation.^{11,13}

The serum amylase was determined in all 22 of our patients within 24 hours of admission. Only five of 18 patients had elevations of over 128 units by the Wohlgemuth method and in the four, studied by the Somogy technique, values ranged between 243 and 380. Similar findings were reported from the VA Hospital at Fort Howard, Maryland. None of the patients with pancreatitis had serum amylase values greater than 500 Somogy units and only 50 per cent of the cases of acute pancreatitis had values in excess of 180 Somogy units.²⁸ Cope and Morrison pointed out that an amylase value of 500 or more Somogy units, which is emphasized in the literature as being necessary for the diagnosis of pancreatitis, would have eliminated all the cases in their series. Heffernon and Cassiet also reported elevations of serum amylase in only 28 of 48 patients with established acute hemorrhagic pancreatitis.²⁹

McCorkle and Goldman noted that the serum amylase levels in patients with pancreatitis fall into six patterns: (1) a sharp rise and fall to normal; (2) a sharp rise and fall to subnormal levels; (3) fluctuation within the normal zone; (4) sustained high values that may occur with extension or continuation of the disease; (5) secondary elevations several days after a fall to normal, indicating either exacerbation or the development of complicating parotitis; and (6) slight elevation late in the disease in patients seen several days after the onset of the illness.³⁰

Attempts to establish arbitrary levels of serum amylase for the diagnosis of pancreatitis do not appear justified. Many cases having the clinical and operative findings of pancreatitis will not be so diagnosed if arbitrary values of three to five times the normal value are depended upon for diagnosis.^{31,32} Further, elevation of the serum amylase is not necessarily diagnostic of pancreatitis as this may occur in patients with perforated peptic ulcer,³³ intestinal obstruction, mesenteric venous thrombosis,³⁴ peritonitis, or pancreatic cancer. Administration of opiates or meperidine may elevate the level.^{28,35} Serum amylase also is affected by factors altering carbohydrate metabolism in the absence of pancreatic disease.³⁶

Peritoneal Fluid Amylase: The concentrations of amylase in the peritoneal fluid may not only be higher than in the blood but may persist above normal for two to four days.^{37,38} High values of amylase in the peritoneal fluid also have been reported in association with mesenteric venous thrombosis.³⁴

Urinary Amylase: Normally, the kidneys concentrate the amylase present in the serum. This relationship usually persists in acute pancreatitis, and the urinary amylase may remain high for a longer period of time than the serum amylase. Further, the urinary amylase levels better reflect the clinical course of the patient than do the serum levels.³⁹ However, in the presence of impaired renal function, the rise in urinary amylase may be delayed whereas the serum amylase will remain elevated.⁴⁰

Serum Lipase: Normally, little lipase of pancreatic origin is present in the blood stream but in pancreatic disease, serum lipase may enter the blood stream in significant amounts. The amount tends to vary directly with the serum amylase, although lipase is elevated in a higher proportion of cases and the elevation may persist longer. The test is less frequently performed because when using the serum and olive oil method, the serum must be incubated for 24 hours. Results may be obtained in one hour if tributyrin substrate is employed,⁴¹ but the value of measuring the serum tributyrinase has been questioned.⁴²

Serum Trypsin: Until recently, serum trypsin levels could not be measured satisfactorily because of the presence of powerful inhibitors of trypsin that are present in the serum. Recently, Nardi proposed a new technique for measuring serum trypsin, using alpha benzoyl-L-arginine

amino hydrochloride which is hydrolyzed in the presence of trypsin to form benzoyl-L-arginine and ammonia. The ammonia is then measured by the Conway micro-diffusion technique.^{43,44} In studies on 58 subjects, Nardi found the serum trypsin to be a more sensitive and reliable index than either serum amylase or lipase. The mean value for 35 normal subjects was 31 tryptic units, whereas the mean value for 16 patients with pancreatitis was 443 tryptic units. Further studies will be necessary to establish the values of the serum trypsin as a diagnostic test.

Antithrombin Titer: Although the antithrombin titer has been reported to be elevated in acute pancreatitis,⁴⁵ other investigators⁴⁶ have not been able to confirm this observation and the test appears to be of little value in diagnosis.

Direct Estimation of Pancreatic Secretory Capacity

The estimation of pancreatic secretion by intraduodenal intubation in the control state gives relatively little information about the function of the pancreas. However, following intravenous administration of secretin, Lagerlof reported two main types of abnormal response.^{47,48} During the first two weeks of the recovery phase after mild to moderately severe acute pancreatitis, enzyme secretion was depressed with the major reduction being in the amylase values. If irreversible damage to the pancreas took place, both enzyme and bicarbonate levels fell. Following the isolation of pancreozymin,⁴⁹ this hormone has been used to assess pancreatic secretory function. Howat suggested the use of pancreozymin in conjunction with secretin, as one is able to stimulate enzyme production as well as secretory volume and bicarbonate output.⁵⁰

Other Laboratory Findings: The white blood count is consistently elevated, ranging between 10 and 30 thousand, and there may be a decrease in the number of lymphocytes.⁵¹ Albuminuria is common, and glycosuria is present in about 10 per cent of the patients.

The blood urea nitrogen frequently is elevated in patients with acute pancreatitis as a result of tubular damage due to the excretion of pancreatic enzymes in high concentration. Elevation of the blood urea nitrogen in the absence of shock is a poor prognostic sign.¹⁶ Elevation of the blood sugar above normal was observed in 31 per cent of our patients, and other reports indi-

cate that the incidence of hyperglycemia may vary from 25 to 66 per cent.^{16, 52}

The serum bilirubin was elevated in 31 per cent of our patients, with the maximum value being 6.8 milligrams per cent. Jaundice may be related to compression of the common duct by the inflamed swollen pancreas, or to concomitant liver or biliary tract disease. Elevations of the serum alkaline phosphates also have been reported.⁵³

Changes in the electrocardiogram may simulate those of coronary occlusion.⁵⁸ However, when studied at autopsy, the coronary arteries and myocardium have been found to be normal.¹³

Roentgen Findings in Pancreatitis: Nonvisualization of the gall bladder is observed in approximately two-thirds of patients in whom gall bladder disease subsequently is ruled out by operation or at autopsy.^{59,60} The high incidence of concurrent gall bladder disease has been noted. Other roentgen findings include limited excursion of the left side of the diaphragm, pleural effusion, atelectasis of the lung, and irritability and spasm of the duodenal loop.^{61,62} Localized paralytic ileus, which is described as an early roentgen sign of acute pancreatitis,⁶³ was observed in only one of our patients.

Treatment of Acute Pancreatitis

Treatment of acute pancreatitis has the following aims: relief of pain; treatment of shock and correction of electrolyte and fluid disturbances; inhibition of pancreatic and gastric secretion; prevention of infection and peritonitis; management of surgical sequelae; and prevention of recurrences.

Relief of Pain: Relief of pain frequently follows parenteral administration of quaternary amine anticholinergic drugs. These drugs suppress gastric and pancreatic secretion and have a muscular relaxant effect upon the pancreatic ductile system.^{64,65,66} Narcotics or epidural block may be necessary for patients with more severe pain.⁶⁷

Treatment of Shock and Fluid and Electrolyte Disturbances: Loss of plasma and red cell mass may result from vomiting, hemorrhagic necrosis, and passage of toxic fluids into the abdomen. Serum albumin and levarteranol are of value in the treatment of shock and the plasma deficit.⁶⁸

Inhibition of Pancreatic and Gastric Secretion: Withholding oral fluid, accompanied by

continuous nasogastric suction, aids in inhibiting the secretin stimulated phase of pancreatic secretion. Concurrent administration of parenteral anticholinergic agents further reduces gastric secretion and depresses both the vagal and secretin stimulated components of pancreatic secretion. Pancreatic secretion also is inhibited following the administration of Diamox®.

Prevention of Infection and Peritonitis: Although pancreatitis initially is an aseptic process, the presence of necrotic material in the abdomen, as well as increased permeability of the bowel to its normal bacterial content, may result in suppurative peritonitis or localized abscess formation. Experimental pancreatitis is favorably modified by treatment with penicillin and streptomycin.⁶⁹ Clinical improvement has been reported following administration of broad spectrum antibiotics to patients with acute pancreatitis.

Management of Surgical Sequelae: Surgical treatment may be necessary for management of suppurative complications such as abscesses or for drainage of pseudocysts. Exploratory laparotomy may be indicated during the interim phase of the disease to establish diagnosis and may be necessary for patients with recurrent attacks of pancreatitis.⁷⁰

Efforts at Prevention of Recurrences: Little is known about the efficacy of efforts to prevent recurrences. Empirically, the use of a low fat diet, frequent small meals, avoidance of alcohol and fatty foods, and the use of anticholinergic agents have been recommended.⁷¹ Treatment of concurrent gall bladder disease also is advised.

Other Measures: Other therapeutic measures that have been recommended include the use of adrenal steroids, X-ray therapy, the use of trypsin inhibitors, and drugs to decrease metabolism of the pancreas. Favorable clinical results have been reported based upon uncontrolled studies using adrenal steroids and ACTH.⁷²⁻⁷⁶ However, the use of steroids in pancreatitis may be deleterious. The secretory response following administration of ACTH simulates that observed in patients with acute pancreatitis.⁷⁷ Ductile proliferation, acute pancreatitis, and fat necrosis have been observed in patients who have been treated with adrenal steroids.⁷⁸

Radiation therapy also has been recommended to reduce pancreatic function,⁷⁹ and propylthiouracil has been suggested to reduce metabolism

of the pancreas temporarily during the acute attack.⁸⁰

Prognosis

The mortality rate in our series was nine per cent. Richman reported a mortality rate of 33 per cent.¹⁶ Machella noted a mortality rate of patients treated surgically of 35 per cent and for patients treated conservatively, 20 per cent.⁸¹ The mortality rate in patients developing pancreatitis following abdominal surgery may be as high as 75 per cent.⁸² The majority of patients appear to make a relatively complete recovery from pancreatitis if they survive the initial attack. A variable percentage, estimated at approximately 20 per cent, develop recurrent attacks of pancreatitis. Chronic relapsing pancreatitis is more common in alcoholics than in non-alcoholics.

SUMMARY AND CONCLUSIONS

Acute pancreatitis is a relatively common medical problem, carrying a substantial mortality rate. The presenting complaints may be variable although abdominal pain is the most frequent symptom.

The majority of cases of pancreatitis seem to result from a summation of mechanical, secretory, and vascular factors. Alcoholism and biliary tract disease predispose to the development of pancreatitis.

The limitations of the serum amylase determination in diagnosis are noted. Dependence upon an elevation to an arbitrary level excludes from diagnosis approximately half of patients having clinical, laboratory, and operative evidences of pancreatitis. Urinary amylase is a more valuable determination for assessing the severity of pancreatitis. The most useful diagnostic adjunct appears to be the determination of the serum trypsin level. Neither the physical examination nor roentgen findings are of particular help in establishing diagnosis of acute pancreatitis.

Treatment is directed toward relieving pain, correction of fluid and electrolyte disturbances, inhibition of gastric and pancreatic secretion, prevention of infection and peritonitis, management of surgical sequelae, and prevention of recurrences. The value of the adrenal steroids in the management of patient with pancreatitis is

not established and their use cannot be recommended routinely.

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Crisis in education

We are facing great crises in medical education and all of the health care services. These far transcend the individual satisfaction of our particular and personal achievements and present a great responsibility to all physicians.

We need more and better trained physicians at a time when medical education is financially in a straight jacket and when confusion and

groping for proper definitions of medical training are going on in the minds of our greatest deans and teachers. How far into premedical years can one successfully start training for medicine? How can the cluttered curriculum be simplified and a trained physician, well grounded in basic science, be produced? *Norton S. Brown, M.D. Retiring Address of the President. New York Med. June 20, 1959.*

The Use of Chlorpromazine in Disturbed Mentally Retarded Children

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In the outpatient clinic of the Dr. Julian D. Levinson Research Foundation for mentally retarded children we have used several of the tranquilizing drugs in treating selected patients. Our greatest experience has been with chlorpromazine* and the present report will be limited to a series of 54 children who have received this drug.

We were particularly interested in comparing our results with those of Davies,¹ Bair,² Esen,³ Carter,⁴ and Tarjan,⁵ who reported improvement in institutionalized children treated with chlorpromazine. We also wanted to see if there was any correlation between the electroencephalogram findings and a patient's response to chlorpromazine.

The children in our series had personality disturbances such as hyperactivity, destructive tendencies, undue aggressiveness, and difficulty in sleeping. Treatment of these symptoms with bromides or phenobarbital had been ineffective or unsatisfactory.

The 54 patients ranged in age from 3 to 17 years; intelligence quotients varied from 10 to 85. Later, the I.Q. of two children fell within the normal range.

The most logical cause of the mental retardation in each patient is listed in Table 1.

The children were graded on the basis of the severity of their disturbances. We were aware of the hazards of using the parent's opinion as the

Table 1 — Etiology of Mental Retardation

Etiology	Number of Patients
Cerebral birth injury	14
Toxemia of pregnancy	2
Rh incompatibility	1
Prematurity	2
Meningitis and/or encephalitis	5
Cerebral dysgenesis or agenesis	18
Developmental anomalies	3
Mongolism	3
Phenylketonuria	1
Maternal diabetes	1
Emotionally disturbed (Psychogenic)	3
Undetermined	1

prime basis for classification. However, we felt that some classification was necessary to evaluate the action of chlorpromazine on mildly disturbed children as distinct from severely disturbed children.

Twenty children were Grade I: minimally disturbed, having sleeping difficulties, tantrums, short attention span. Seventeen were classified as Grade II: under more tension, misbehaving in school, and somewhat aggressive. Nine were classified Grade III: almost unmanageable in school and something of a threat in the home, both as to danger to other siblings and to property. Grade IV included eight children who were so aggressive and destructive that only one attended school.

In our series, 17 of the children had a history of convulsions, although only six were currently having them. Forty-six of the 54 patients had electroencephalograms taken at some time. Twenty patients had normal electroencephalograms (of which two were described as borderline normal), 12 had electroencephalograms showing spikes or seizure discharges, 11 had electroencephalograms showing 14 and 6 per second positive spike discharges,⁶ and three patients had atypical frequencies in the electroencephalograms. Fifteen of the children treated with

Chlorpromazine (Thorazine®)—Kindly supplied by Smith, Kline & French Laboratories, Philadelphia.

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Table 2 — Relationship of Response of Chlorpromazine to Initial Behavior

Initial Behavior	Response				Total
	Worse	No Change	Moderate Improvement	Marked Improvement	
Grade I	3(15%)	5(25%)	5(25%)	7(35%)	20
Grade II	2(12%)	5(29%)	7(41%)	3(18%)	17
Grade III		4(44%)	1(12%)	4(44%)	9
Grade IV		4(50%)	3(38%)	1(12%)	8

chlorpromazine also were on anticonvulsant medication (sodium diphenylhydantoin,* primidone,** or methyl-phenyl-ethyl-hydantoin.***)

Dosages of chlorpromazine were varied for each patient on a trial and error basis, until an appropriate effect was obtained or the drug was discontinued. Dosages ranged from 30 to 800 mg. per day; the majority received 30 to 75 mg. per day. Some have received this medication for up to 2½ years.

The value of the drug was assessed in the majority by subjective reports from the parents. Improved behavior was observed clinically by the staff or teachers at school; in 15 it was marked, and in 16, moderate. There was no change in behavior in 18 and five were considered worse. Twenty-seven children are still receiving the medication. The group of children showing the greatest improvement included two mongoloids, four postmeningitic and/or postencephalitic patients, four with cerebral birth injury, and five with cerebral dysgenesis or agenesis.

As can be seen from Table 2, a favorable response to chlorpromazine seemed to occur about

equally in all four categories of behavior disturbance.

There seems to be no consistent correlation between behavior change and electroencephalogram findings as presented in Table 3.

We did not measure the patient's I.Q. routinely before and during medication. One patient (case #35)* who showed a poor response to the drug has had a progressively higher I.Q. Case #25 had an increasing I.Q. and a good response to medication. Eight children showed somewhat lower I.Q.'s when placed on medication, independent of their response to medication when measured by behavior change. We cannot confirm the results of Bair,² Esen,³ and Tarjan⁵ who noted improvement in the mental functioning of their patients.

Two somewhat undesirable side effects of chlorpromazine were noted during this study:

(1) Drowsiness or fatigue was noted in 9 patients. In one, the effect was counteracted by adding dextro-amphetamine sulfate and amobarbital. In three, the depressant effect was so marked the parents discontinued chlorpromazine.

(2) Convulsions occurred for the first time in two patients started on chlorpromazine and increased in frequency in two other patients. One child (case #43) had had no convulsions but he was getting diphenylhydantoin sodium for an

*Available as Dilantin®, Parke Davis & Co., Detroit, Mich.

**Available as Mysoline®, Ayerst Laboratories, New York.

***Available as Mesantoin®, Sandoz Pharmaceuticals, Hanover, N. J.

Table 3 — Response to Chlorpromazine Compared with Electroencephalogram Findings

Behavior		Electroencephalogram Results		
		Abnormal	None	Total
Worse	3	2 (1 seizure discharges 1 — 14 & 6)	0	5
Same	6	8 (5 — seizure discharges 3 — 14 & 6)	3	17
Moderate Improvement	3	11 (4 — seizure discharges 5 — 14 & 6 2 — atypical frequencies)	3	17
Marked Improvement	8	5 (2 — seizure discharges 2 — 14 & 6 1 — atypical frequencies)	2	15

abnormal electroencephalogram (14 and 6 per second positive spikes). After taking chlorpromazine for two weeks, in addition to diphenylhydantoin sodium, his only convulsion occurred. No change of behavior was noted during the two week period. The second child (case #4) with a normal electroencephalogram had two closely spaced convulsions; the drug was discontinued for a week and then was given along with phenobarbital. A third convulsion occurred. Medication was again discontinued but the child's behavior became so unmanageable we reinstituted chlorpromazine, this time with diphenylhydantoin sodium. No additional convulsions have occurred. The third child (case #15) with a borderline normal electroencephalogram, whose seizures were well controlled by phenobarbital began having seizures soon after adding chlorpromazine although behavior was improved. The addition of methyl-phenyl-ethyl-hydantoin to the chlorpromazine and phenobarbital has kept him free of seizures. The fourth child (case #54) whose electroencephalogram showed both petit mal and grand mal was having frequent seizures despite a variety of medication. He had severe convulsions intermittently for several days following a single 25 mg. tablet of chlorpromazine.

DISCUSSION

Many children who are mentally retarded also have emotional difficulties, such as antisocial behavior, which often cause grave problems for parents who have to manage mentally retarded children. Mentally retarded individuals, especially those falling in the educable class, can make a contribution to society if their behavior is relatively stable. Chlorpromazine in our experience has been effective in treating the hyperactivity of some mentally retarded children.

Gatski,⁷ Hunt,⁸ and Freed,⁹ reported more improvement in emotionally disturbed children when given chlorpromazine than we noted in our patients with mental retardation. Our results are more in agreement with those reported by Freedman.¹⁰

At present, it is not possible to predict a patient's response to chlorpromazine. From the limited material available from this study, children with a frank brain injury seem to respond more favorably to medication than those whose mental retardation seems to be due to a lack of brain development.

The most serious side effect of chlorpromazine has been the occurrence or increase in frequency of convulsions in four children. This complication has been noted by Tarjan⁵ and others. It is interesting to speculate on this reaction in light of the work reported by Bonnycastle¹¹ who found that anticonvulsants increased the serotonin (5 hydroxy tryptamine) levels in rat brain. Chlorpromazine is a serotonin antagonist. Possibly chlorpromazine causes convulsions in an occasional patient because of its antiserotonin action.

SUMMARY

Chlorpromazine in doses ranging from 30 to 800 mg., but usually on the order of 50 mg. a day, was given to 54 disturbed mentally retarded children. Thirty-one (57 per cent) showed improved behavior, which was marked in 15 (28 per cent.) Fifteen children with abnormal electroencephalograms also received anticonvulsant medication during the trial with chlorpromazine. Nine became drowsy on chlorpromazine. First convulsions occurred in two patients and increased convulsions occurred in two other children.

It is not possible at present to predict which patients will respond favorably to chlorpromazine.

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Phenylbutazone

EUGENE F. TRAUT, M.D., CHICAGO

Phenylbutazone (Butazolidin®) is a much more effective antirheumatic than any previously used drugs with the exception of the steroids. Its chemical structure, medical use, and even its harmful potentialities resemble those of aminopyrine. Its anti-inflammatory, analgesic effects are so specifically skeletal as to justify the adjective antirheumatic.

Phenylbutazone enters joints, the concentration in the synovial fluid being 50 per cent of that in the serum. It does not lower the sedimentation rate nor reduce the C-reactive protein. The drug does not exert its antirheumatic effect via the hypophyseal-adrenal axis. Hypophysectomy or adrenalectomy does not modify its therapeutic action. It promptly reduces hyperuricemia.

According to some, its effect resembles that of probenecide. It blocks reabsorption of urates in the tubule. Its urate reducing effect is in direct proportion to the amount of uric acid in the plasma. Some have failed to find an increased urate excretion.

Its other physiologic effect, undesirable enough to be termed a side reaction, is the retention in the body of sodium chloride and water. During the administration of phenylbutazone, glomerular filtration is normal but the reabsorption of sodium chloride in the tubule is accelerated, to be followed by a corresponding increase in the reabsorption of water. Usually, hypernatsemia and edema can be controlled easily and promptly by withholding table salt. Occasionally these conditions precipitate or intensify congestive heart failure, necessitating the use of diuretics.

Two other and more serious side effects are bone marrow depression and ulcerogenesis. The formula of phenylbutazone includes the benzene rings so frequently associated with damage to hematopoietic tissues. The relation of phenyl-

butazone to the formation or aggravation of gastric or duodenal ulcer is recognized but is poorly understood. The literature is replete with instances of ulcer reactivation characterized by abdominal distress, upper gastrointestinal bleeding, or even fatal perforation following administration of this drug. Almost one-half of the patients experience some sort of abdominal discomfort while taking phenylbutazone. In my experience this cannot be prevented by antacids or diet however meticulously prescribed or conscientiously taken. Neither hydrochloric acid nor pepsinogen have been found consistently elevated in patients taking phenylbutazone. Peptic ulcer may occur even in patients with achlorhydria. It is said that gastrointestinal side effects do not occur with parenteral or rectal administration of the drug.

Most of the deaths attributed to phenylbutazone have been due to granulocytopenia or agranulocytosis. The blood findings may cover the whole range of granulocytopenia, thrombocytopenia, agranulocytosis, and pancytopenia.

Among the mildest toxic effects of this drug is an erythematous rash, which usually appears first over the neck or the upper part of the thorax. Itching may be present. There have been a few reports of exfoliative dermatitis associated with its use.

Toxic reactions have been ascribed to hypersensitivity. When widespread, the common denominator has been angitis, resulting in widespread necrosis. Such tissue reactions are unpredictable and not necessarily related to the size of the dose or duration of treatment. They have appeared weeks after discontinuing the drug. Keeping the daily dose of the drug at 800 mg. or less has resulted in fewer reactions.

Despite the impressive list of uncomfortable and even fatal reactions attendant upon taking the drug, it remains a valuable addition to the treatment of rheumatic disease.

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In my experience, the drug is most effective in acute gouty arthritis and least effective in rheumatoid arthritis. The patient with acute gouty arthritis, particularly in one of his early episodes, can be assured of great relief within 24 hours and of complete subsidence of discomfort within 48 hours. I commonly ask such a patient to take 200 mg. of phenylbutazone each six hours for six doses. I also must admit to bolstering this dose by the injection of 40 mg. of corticotropin in repository form at the onset of the attack and 12 hours later. I lower the daily dose of phenylbutazone by 200 mg. each two days until cessation. Because of its toxic potentialities I do not prescribe phenylbutazone for interval gout nor for chronic gouty arthritis.

The success attending the administration of phenylbutazone to patients with ankylosing spondylitis (Strümpell-Marie disease) makes the leukemia risk of X-ray treatment unnecessary. In patients with spondylitis, the drug is given in doses as small as 100 mg. daily for many months.

Phenylbutazone has proved helpful in the treatment of the periartritic shoulder syndromes (tendinitis, bursitis, capsulitis.) It also gives relief in other rheumatic syndromes involving largely soft tissue such as the low back syndrome (lumbago). Degenerative arthritis of the vertebrae and of the knee respond satisfactorily. Phenylbutazone in moderate dosage has made life tolerable for patients with carcinomatous metastases to bone. It is effective in treating the arthritis of rheumatic fever but it should not replace salicylates in this disease. Superficial phlebitis improves visibly, within hours, when treated with phenylbutazone. Contrary to the usual concepts, Charcot joints may be the seat of considerable pain. Pain in the joints must be differentiated from the lightning pain of tabes. Phenylbutazone has yielded satisfactory results as therapy for pain in and about Charcot joints.

In my experience, phenylbutazone has had the highest failure rate in rheumatoid arthritis. After repeated failures, I no longer use it as the only or principal drug in treating this form of arthritis. I am currently using it together with steroids in treating the rheumatoid arthritis of disseminated lupus erythematosus.

It has never failed to activate a pre-existent peptic ulcer. Meticulous medical management will not prevent such activation. This potentially

toxic drug should not be used in any patient known to have or suspected of having a bone marrow deficiency. It is contraindicated in potential or existing heart failure. A patient is never given more than enough phenylbutazone for two weeks. All prescriptions carry "Do not refill" warnings.

Treatment of any side effects depends upon their kind and severity. The appearance of mild swelling of the legs may require more strict avoidance of salt. Bothersome edema in spite of salt restriction necessitates the use of chlorothiazide temporarily or during the use of phenylbutazone. Slight erythema about the neck can be treated by reduced dosage. If redness increases, stop the drug. Exfoliative dermatitis necessitates withdrawal of the drug and the use of steroids in liberal doses.

We make survey smears of the blood, weekly at first, then each two weeks. The smears are stained with Wright's stain and examined for the quality of the red staining of the erythrocytes (anemia), shape and size of the red cells, the number of platelets, the relative number of leucocytes, and the relation between granulocytes and mononuclear cells. Upon discovery of diminished platelets or granulocytes, phenylbutazone is withdrawn and a complete blood count is made every three days until a normal hemogram is obtained. In spite of treating hundreds of patients, we have never encountered anything worse than a deteriorating hemogram. Prompt withdrawal of the drug has always led to a normal blood picture. Marked bone marrow changes, severe granulocytopenia, or thrombocytopenia would necessitate, beside withdrawal of phenylbutazone, vigorous and immediate and adequate combiotics and steroids. Blood transfusion may be required.

Demonstration or even suspicion of ulcer may require withdrawal of the phenylbutazone. Routine or modified ulcer management may be tried to control the symptoms and even heal a demonstrable ulcer without withdrawal of the drug. The undertaking of this calculated risk depends upon the urgency of the joint condition. If the ulcer is gastric and does not respond promptly to medical care it should be excised.

My usual dose for an adult of average or large size with marked disease is 800 mg. daily (200 mg. after each meal and at bedtime). The drug is stopped if there is not outstanding, unequivocal

improvement within 72 hours. With improvement, the dose is reduced to 600 mg. (200 mg. after each meal) on the third day; 400 mg. (100 mg. after each meal and at bedtime) on the sixth day; and to 300 mg. on the twelfth day. Reductions thereafter depend upon the status of symptoms and findings. Usually the patient will be well enough to maintain improvement on 200 mg. daily (100 mg. morning and night) on the sixteenth day and 100 mg. daily for an indefinite time thereafter. In acute gouty arthritis, the drug can be discontinued in one week.

I ask all patients taking the remedy to avoid salty food and use no salt at the table. If they become edematous I have them avoid salt in cooking. I may give chlorothiazide for an obvious edema.

Salicylates are given coincidentally and continuously up to tolerance in all the above conditions. Prednisolone often is used in degenerative arthritis as well as in rheumatoid arthritis. In addition, each patient is guaranteed access to the many measures currently available to eliminate the joint disease or at least its progress and symptoms. These include instruction in mental and physical hygiene, traction, exercises, braces, heat and massage, and removal of suspected focal infections.

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Tension pneumothorax

The relief of a tension pneumothorax requires no special apparatus. Frequently the insertion of a needle into a tension pocket will be followed by the plunger's blowing out of the syringe by a rush of the escaping air which will continue until the excess pressure is relieved. The rule is that a tension pneumothorax tends to recur and consequently one must make provision for repeated decompression by inserting a small catheter in the second anterior interspace in the midclavicular line and connecting it to an under-water breakover so that any accumulating pressure will be dissipated through the water seal. The insertion of a catheter at the base posteriorly

is proper for the removal of fluid but soon plugs with fibrin and does not remove the airpocket which forms anteriorly. If both fluid and air must be removed, two catheters should be used. A constant, negative pressure suction pump with very low negative pressure of 1 or 2 cm. of water may be substituted for the under-water breakover. Traumatic pneumothorax may occur bilaterally and must be recognized and relieved promptly or the patient may succumb rapidly. Pneumothorax may not be present when the patient is first seen but may develop insidiously hours afterwards or dramatically after an episode of coughing or straining. *Thomas J. Kissella, M.D. Chest Injuries from Automobile Accidents. Minnesota Med. June 1959.*

Essential Hypertension and Obesity

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It is an age old belief, based on experience, that obese people develop apoplexy more frequently than do thin individuals, and the related idea that there is a connection between obesity and hypertension has persisted. Many investigators have tried to prove or disprove these concepts. The nature of the relationship between essential hypertension and obesity still is not conclusively determined. However, the solution of this problem would be of great practical importance.

The correlation between the two diseases emerges more and more clearly from the medical literature of the last three decades. Reliable mortality statistics comparing the relative longevity of the normotensive nonobese, the normotensive obese, the hypertensive nonobese, and the hypertensive obese should help in our understanding. Comparison of the survival rate of underweight hypertensives and obese normotensives would be further aid. The duration of the nutritional state and hypertension also would be valuable.

There are different definitions of obesity and of essential hypertension. The most generally accepted criteria for obesity are the Metropolitan Life Insurance Company's ideal weight tables and the Broca formula.¹ The disagreement is greater concerning criteria for hypertension; however, blood pressure readings above 140/90 mm. of mercury usually are considered elevated.

Objections have been voiced regarding blood pressure measurement by the indirect (auscultatory) method on the supposition that the obese

arm yields higher values. Among others, Boe and co-workers² expressed the opinion—based on 69,976 determinations—that an extremely obese arm will give only a slightly higher reading. To correct this alleged discrepancy, a wider arm-cuff has been recommended. Pickering advocated introducing a correction number for arm circumferences in comparison within large groups, but doubted the usefulness of correction in individual readings.³ However, recent investigations of Van Bergen et al.⁴ revealed that indirect measurement of blood pressure never exceeded the directly measured (intra-arterial) blood pressure, and the indirect measurement is increasingly lower than the direct reading as blood pressure rises. The latest report on this subject by Whyte demonstrated no relationship between blood pressure and arm circumference.⁵ Clearly, criticism of the correlation between obesity and essential hypertension on the basis of unreliability in the auscultatory method is not valid.

The true correlation between essential hypertension and obesity has further aspects. Although Boe et al. hold the opinion that elevation of blood pressure seldom is caused by obesity, there is overwhelming evidence that blood pressure is proportionate to weight, and that increasing weight increases the blood pressure.⁵ Many reports have indicated that undernourishment decreases blood pressure independent of sodium metabolism; after a reducing diet, the blood pressure in essential hypertension decreases or returns permanently to normal. Among others, Pickering reported that during World War II in countries where there was starvation, the blood pressure as well as weight decreased.³

Although obesity as the etiological factor of essential hypertension still is unproved, there is no doubt that essential hypertension is more frequent among obese than non-obese subjects. In

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While the Nutrition Committee of the Chicago Heart Association is sponsoring this article, the opinions expressed are those of the authors and do not necessarily represent the official view of that committee.

a recent study of a young adult population, 11.3 percent of the obese, and 4.9 percent of the nonobese were found to be hypertensive. This means more than twice as many hypertensives among the obese as among the nonobese. Highly significant differences were found in the incidence of obesity among normotensives and hypertensives, the ratio being 26.5 and 47 per cent respectively.¹

Long series of life insurance company statistics unequivocally reveal that prolonged overweight shortens life expectancy, and increases the incidence of death from cardiovascular diseases. Conversely, longevity increases with underweight. Numerous reports support the association of hypertension and obesity, with an increased risk of coronary disease. Mortality from essential hypertension is more frequent in the obese than in the nonobese population. Transient hypertension or overweight at a young age predisposes to the development of permanent hypertension. Obesity or essential hypertension, each by itself, shortens life expectancy. The coexistence of the two conditions must have an additional effect on the mortality curve, increasing the probabilities of complications, causing disability at an earlier age, and shortening further the life expectancy.

The causes of hypertension and obesity may include several factors, of which many are probably common to both. For example, the possibly interrelated and equally important factors of heredity, environment, hormones, diet, and civilization with its accompanying inactivity, seden-

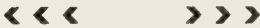
tary life, and emotional frustrations may play a role.

The conclusion can be stated that essential hypertension is more frequent in obese than in nonobese persons and that obesity aggravates essential hypertension. Blood pressure generally is proportionate to body weight, and weight reduction lowers the previously elevated blood pressure. Obesity and essential hypertension, each by itself, shortens life expectancy and the existence of the two conditions decreases it. Although there is no proof that obesity is the real and sole cause of hypertension, the observation that weight reduction proportionately decreases the blood pressure speaks for obesity as a contributing factor. It is not established that weight reduction improves the prognosis of essential hypertension³ but it is known that persons whose weight is normal or below live longer. Therefore, normal weight is strongly desirable. The pure effect of obesity on blood pressure may be overestimated, but the consequences of the coexistence of essential hypertension and obesity are grave.

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Shock of Cardiac Origin

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Cardiogenic shock, seen most commonly as the result of an acute myocardial infarction, has been of particular interest these last few years as powerful pressor drugs have become available. No spectacular advances have been made toward its successful treatment, and most patients with shock from acute myocardial infarction still die from the underlying disease. Nonetheless, intelligent and meticulous care can save some patients who would otherwise die. Before starting treatment it is of first importance to be certain that the type of shock is cardiogenic. It is equally important to know the cause of the cardiac disorder. Therefore, I would like to consider four topics:

1. The pathogenesis of cardiogenic shock as contrasted to the pathogenesis of other types of shock.

2. The circulatory events in cardiogenic shock.

3. The recognition of cardiogenic shock and its clinical characteristics.

4. Its treatment.

1. The pathogenesis of cardiogenic shock is contrasted with that of other types of shock in Table 1. In cardiogenic shock the venous return to the heart is adequate. The low cardiac output is due to the heart's inability to pump adequate amounts of blood into the arteries, even though sufficient venous blood is available.

2. The main circulatory events in shock of cardiac origin are listed in Table 2.

It is difficult to name a blood pressure value below which shock may be said to exist, and above which it is absent. Thus, a patient who has had hypertension and whose pressure falls to 100/80 after a myocardial infarction may appear to be in shock, when his sensorium is dulled,

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TABLE 1
PATHOGENESIS OF SHOCK

1. Poor return flow of blood to the heart resulting in a low output (the heart itself is capable of full function).
 - a) Blood volume too low
Hemorrhage
Dehydration
Severe Burns
 - b) Blood volume essentially normal, but not all of blood available
Bacteremic shock
Irreversible normovolemic shock
Venous dilatation as from an overdose of a ganglionic blocking drug
2. Return flow of blood to heart adequate but heart not capable of full function and output low (cardiogenic shock).
 - a) Acute myocardial infarction
 - b) Cardiac tamponade
 - c) Terminal heart failure
 - d) Arrhythmia
 - e) Myocarditis
 - f) Ball valve thrombus or tumor occluding mitral orifice
3. Pulmonary embolism
4. Combinations of 1 and 2
5. Peripheral vasodilatation

his extremities are cold and pale, and his pulse is rapid and thready. It is worth mentioning as an aside that femoral arterial pressures recorded directly often are considerably higher than the pressures determined by a sphygmomanometer

TABLE 2
CIRCULATORY EVENTS IN CARDIOGENIC SHOCK FROM ACUTE MYOCARDIAL INFARCTION

- 1) Low arterial pressure
- 2) Low cardiac output
- 3) Peripheral vasoconstriction (increased TPR) in most cases
- 4) Circulation time prolonged
- 5) Venous pressure usually elevated (pulmonary venous pressure probably always elevated)
- 6) Blood volume normal or increased
- 7) Tachycardia usually

on the arm. Of course, this does not diminish the clinical significance or usefulness of blood pressures as ordinarily determined.

In most instances where it has actually been measured, the cardiac output has been very low.²⁻⁵ All clinicians, however, are familiar with the patient who faints, or who recovers spontaneously from a limited period of hypotension after an infarction. The cardiac output might be normal or high in such cases. Stead⁶ reported a patient whose output was 5.3 liters per minute despite a blood pressure of only 66/44. Lee⁷ was surprised to find cardiac outputs within the normal range in two patients who had been in circulatory collapse on admission but who had normal arterial pressures during the output determination.

Although there usually is over-all vasoconstriction, or an increase in the calculated total peripheral resistance, this is not always the case, as has been pointed out by Agress⁸. In five of 14 cases reported in the literature there was no evidence of over-all vasoconstriction. This suggests a vasodilating influence in those cases, since there should have been not only reflex vasoconstriction from the carotid sinus and aortic arch receptors, but also narrowing of the peripheral vessels as a result of decreased flow and distending pressure.

It is likely that the central venous pressure is always elevated in cardiogenic shock, though the pressure in the antecubital vein may not always be high. We found peripheral venous pressures of 179, 220, 65, and 175 mm. of saline in four patients in shock from an acute myocardial infarction. Lee⁷ noted the external jugular veins to be distended in 11 of 12 instances of acute myocardial infarction.

3. The recognition of cardiogenic shock depends heavily upon recognition of one of the causes of cardiogenic shock listed under heading 2 in Table 1. A patient who is in shock and who has a history and findings typical of acute myocardial infarction, presumably is suffering from cardiogenic shock due to acute myocardial infarction. Even in this situation be alert for a mixed pathogenesis. For example, occult bleeding in an individual with coronary artery disease can produce both shock and myocardial infarction secondary to the shock.

Whatever the cause of the heart disease, the

following findings are helpful in identifying shock as cardiac in origin:

A. High venous pressure. This may be gauged most easily by inspection of the neck veins in a semi-sitting position. A clearly elevated venous pressure in a patient who is in shock is almost pathognomonic of cardiogenic shock (in the absence of superior caval obstruction).

B. The finding of pulmonary congestion and edema in a patient in shock.

C. Absence of other reasons for shock: no reason for a low blood volume; no evidence of infection or acute adrenal insufficiency.

4. The proper treatment of cardiogenic shock is dependent upon the accurate identification of its cause. When arrhythmia or acute cardiac tamponade is responsible, specific therapy is possible. A consideration of the recognition and management of all the cardiac disorders that can produce shock is beyond the scope of this discussion. A correct diagnosis will be taken for granted and certain aspects of the treatment of shock from acute myocardial infarction will be considered.

The management of shock in these patients is reasonably started with accepted measures: bed rest, oxygen (preferably by mask, if tolerated), reassurance, and control of pain. Narcotics for pain in a patient in shock should be given intravenously and in a small dose, which may be supplemented if found inadequate. The usefulness of aminophylline or the xanthine drugs in the patient with shock is uncertain.

Should the blood pressure not rise after these simpler measures, or should it be exceedingly low as treatment is commenced, the use of pressor drugs or of digitalis glycoside should then be considered. There are two big problems to be considered in their evaluation. Theoretically, there is the danger that elevating the arterial pressure, by increasing cardiac work, will place an intolerable burden on an already damaged heart. Opposed to this is the knowledge that prolonged severe hypotension is fatal by itself, and that permanent damage can be inflicted on areas of the heart and brain when the arterial pressure is so reduced that it cannot drive enough blood through narrowed and diseased vessels.

Since there is no experimental counterpart for clinical coronary artery disease, the final evaluation of therapy depends upon the study of patients. There is no study on the treatment of

shock in acute myocardial infarction in which results of a given treatment in one group of patients can be contrasted to the results without that treatment in a strictly comparable group of patients. It is the clinical impression of most workers, however, that pressor drugs are of value and save some patients who would otherwise die. The mortality rate without pressor drugs has been reported in various series of cases as between 70 and 90 per cent. Agress⁸ found the mortality rate in patients treated with levarterenol averaged 60 per cent for 131 patients collected from 10 series including his own. He showed also that the mortality rates in these different series varied from 14 to 86 per cent. Such a degree of variation must result from tremendous differences in the gravity of the cases seen by various workers, and emphasizes the lack of proper controls. In two patients in whom we attempted to measure the change in cardiac output after levarterenol, we found if anything a decrease in output, despite a clear pressor effect. Both patients died. The details of pressor therapy are given in various reviews.⁸

Since shock from acute myocardial infarction may be regarded as resulting from myocardial weakness, the use of digitalis has some theoretical justification. Gorlin and Robin⁹ have described encouraging results in series of five patients who received a rapidly acting glycoside. Half the usual dose had a therapeutic effect and more than this could produce toxic effects, so that if tried, it should be given in small doses, to be repeated if advisable.

Adrenal cortical hormones probably are of no value.⁸ There is no theoretical basis for the use of transfusions and their clinical effects have not been encouraging.

SUMMARY

Shock of cardiac origin differs from other types of shock in that the venous return flow to the heart is adequate. The diseased heart, however, is unable to maintain an adequate cardiac output. The blood pressure is low, there is peripheral vasoconstriction, a prolonged circulation time, an elevated venous pressure, and a normal or increased blood volume.

Clinically it is characterized by the evidences of specific cardiac disease and an elevated venous pressure in the presence of shock. Pulmonary congestion or edema is a common finding.

Treatment depends to a great extent upon the correct diagnosis of the specific cardiac disease. The use of pressor drugs and digitalis glycoside is considered.

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Clinical-Surgical Conferences



Tetanus

Department of Surgery Cook County Hospital

Moderator:
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Discussants:
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Dr. Robert J. Freeark: The development of tetanus in a patient is a complication that fortunately befalls few physicians. The extreme rarity with which we encounter this condition, however, serves to make its occurrence all the more tragic. This disease has a high mortality rate but is almost 100 per cent preventable. Its occurrence invariably means someone has erred. It may have been the pediatrician, who omitted the standard childhood immunizations, the patient who failed to seek medical aid for an insignificant wound, or the surgeon who did not wish to risk a reaction to the horse serum antitoxin after suturing a laceration. Without an omission somewhere along the line, there would be little need for a conference on tetanus such as we are having. Tetanus is still with us at the Cook County Hospital. Over 200 cases have been

treated in the last 18 years. The condition has occurred on our own wards as well as in patients referred from other hospitals throughout the state.

The wound of entrance for this infection is detailed in Table 1. The predominance of patients who developed tetanus as a result of narcotic addiction is an experience that is unusual. The other wounds are of a diverse nature and offer considerable food for thought to physicians and surgeons entrusted with their care.

Two recent experiences with tetanus at Cook County Hospital are presented today. To discuss them, we have a panel of experts from our own staff. Dr. Perlstein and Dr. Stein have been tireless workers on the Tetanus Team here at County for a number of years. Also with us

TABLE 1	
Presumed source of infection in 115 cases of Tetanus Cook County Hospital 1953 - 1959	
Needles (Narcotic Addicts)	73
Lacerations	17
Burns	6
Gangrene (Arteriosclerotic	4
Diabetic	
Frostbite)	
Nails (Puncture Wounds)	2
Abrasions	4
Abscessed Teeth	2
Open Fractures	3
Wood Stick (Puncture Wound)	1
Gynecologic (Pyometritis)	1
Source Unknown	2

today are several other members of the hospital staff who have provided invaluable assistance in the care of these patients and we hope to hear from all of them during the course of the discussion.

Case 1:

Dr. Fabian Udekwa (Surgical Resident): This 33 year old Negro female fell into an open manhole while going to a launderette on the morning of February 20, 1959. She sustained a long, deep laceration of the lateral aspect of the right calf just below the knee. She was rushed to a nearby hospital where she received an injection that was said to be antitetanus serum but this could not be confirmed on subsequent investigation. Following application of a sterile dressing she was transferred to Cook County Hospital.

On admission, the patient's general health appeared excellent and general physical examination disclosed no abnormalities other than the laceration mentioned above. The wound was approximately 8 cm. in length and extended through the skin, fascia, and superficial muscles of the lateral calf. There was no evidence of neurologic or vascular damage in the involved extremity, and wound care was undertaken shortly after admission. The area adjacent to the wound was first carefully shaved and scrubbed with soap and water for 10 minutes. The wound itself was next exposed and subjected to careful debridement and cleansing, utilizing copious saline irrigations. The general appearance of the wound was excellent and primary closure in layers was completed approximately four hours after the injury. Small amounts of 1 per cent procaine had been injected into the wound as a local anesthetic, and the patient was placed at bed rest without antibiotic or additional antitetanus treatment.

On February 25, five days after surgery, the wound was observed to be tender, inflamed, and grossly infected. The sutures were removed and the wound debrided and left open. On February 27, the patient developed dysphagia and mild trismus. On February 28, she was seen by a member of the Tetanus Team and transferred with a diagnosis of tetanus. Shortly thereafter full-blown symptoms of tetanus developed with nuchal rigidity, rigid abdomen, marked increase in lumbodorsal muscle tone, and brief generalized muscle spasms.

Dr. Freeark: I want to emphasize that this was a rather routine "County" laceration. There was nothing particularly unusual about it, and it was not unlike many similar injuries that are handled every day in the surgical wards and outpatient departments of this hospital. In many respects, the local wound care was far better than that given many similar lacerations treated in outpatient clinics throughout this state. The wound care in this case was supervised by the resident and was optimal in terms of debridement and irrigation. The wound appeared clean after the cleansing, and we make no apology for deciding in favor of primary closure. The omission of antitoxin at this institution was based upon a statement of previous treatment made by the patient. We were unable to confirm this, however, after reviewing the records of the referring hospital.

Dr. Meyer A. Perlstein: When tetanus develops, the method of prophylaxis must be evaluated. As you know, this can be accomplished by means of passive immunization, using antitoxin derived from animal serum, or by active immunization using a booster dose of toxoid. The latter method is effective only if the patient has received a properly spaced series of primary toxoid injections within the last 3 to 5 years.

Figure 1 shows the titers of antitoxin in the blood, with various immunization schedules. I think the first important thing to note is that a dosage of 1,500 units of antitoxin is not adequate and this dosage should be dropped entirely. The dose will have to be between 5,000 and 10,000 units of antitoxin, and I think 5,000 is not enough. I would rather give 10,000. Once tetanus has developed, we give 80,000 units because, with this dosage, a level is established that will stay up

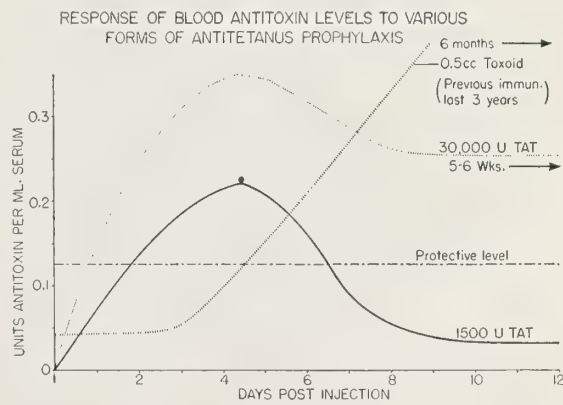


Figure 1.

for several months. Some authorities advocate the use of repeated doses of antitoxin at weekly intervals for badly infected wounds. As indicated in the figure, this appears unnecessary if the initial antitoxin dosage has been adequate. We have discouraged repeated doses of antitoxin because of the increased risk of anaphylaxis or serum sickness. The question of combinations of antitoxin and toxoid for prophylaxis remains unanswered. I have the impression that the addition of antitoxin with toxoid to a previously immunized patient tends to limit the usual response to the toxoid.

There were several interesting things about this first patient. On February 27 she developed her first symptoms — dysphagia and trismus. On the next day, she was transferred to the tetanus ward because of spasm. The general rule is that if spasm occurs within 24 hours after the first symptom, tetanus will be fatal in 90 per cent of the cases. If the seizures begin within the first 48 hours — and I am talking not about the incubation period but about the interval between the onset of the first symptoms and the onset of seizures — the mortality rate is 70 per cent. If it is over 48 hours, between the second and fifth days, then the mortality drops abruptly from 50 to 30 per cent. If you are lucky enough to have a patient who has an interval of over five days, you can expect a mortality of 10 per cent or less. So the mortality rate is dependent upon the interval between the onset of the first symptoms and the first seizure. In this particular patient, a poor prognosis was apparent.

Regarding therapy, we could say in general that if you can keep the patient alive a week, he should recover. This is especially true since the advent of meprobamate which is effective when used intramuscularly in eliminating spasms caused by somatic stimuli. The beauty of this drug is that it permits us to drop the dosage of barbiturates from 25 gr. a day to 1 to 3 gr. a day and the patients are now able to tell you what is wrong with them. Many patients have been killed because we kept them in coma to control their spasms. It is like giving morphine in appendicitis. We have learned of many complaints we were not aware of before. With meprobamate, if the patients have seizures in spite of having been given this drug, you can ask them what is wrong and they can tell you. Maybe it is the urethral catheter that should be removed, a fecal impac-

tion, or a pulmonary complication. These irritations precipitate spasms and seizures that can be corrected promptly if we know about them.

When I saw this patient I thought she was doing well enough and was going to recover but she did not. She died on the fifth day. She had a tracheostomy and the full tetanus therapeutic regimen. It is our experience, now that we keep our patients awake, that most of the complications are respiratory, such as collapse of the lung or pneumonia due to bronchial obstruction with large plugs of mucus. What killed this patient I do not know. I think many of our deaths from tetanus are nursing deaths or deaths preventable by the proper type of nursing care. One thing of paramount importance is assistance from the anesthesiology department. You need someone who can give complete respiratory care and instruction. Nurses should be trained in the care of the tracheostomized patient and the detection of early respiratory distress.

If a patient with tetanus dies within the first or second day after onset of symptoms, death usually is due to asphyxia or circulatory collapse. There may be marked atelectasis of a lung with secondary infection or some other complication, but a large number of them die for reasons as yet unknown. They simply develop dysrhythmia of breathing and pulse and pass out as they do with bulbar poliomyelitis. The cause of death in these patients often remains obscure.

Dr. Freeark: This was purely a surgical problem originally and I would not like to let it get by without considering some of the surgical aspects. The concept of the puncture wound as a precipitating factor in the development of tetanus has been belabored to the point where this wound is getting better prophylaxis all the time. Yet our experience here indicates that modern tetanus seldom is caused by a puncture wound. A wide variety of other wounds has been responsible. For the benefit of the surgeons, Dr. Perlstein, if we encountered a badly infected wound in a patient with tetanus, how much and what type of wound care should be given, and does it affect the ultimate result once the disease is established?

Dr. Perlstein: I had better let you surgeons handle the question of the wound. There are some who advocate wide excision or even amputation, while others prefer to treat the wounds as any

other and incise only if fluctuation exists. What have you been recommending?

Dr. Freeark: Our feeling is that whenever possible, the wound should be excised. If that cannot be done, then debridement of all nonviable tissue and elimination of all dead space are essential. The principle is to convert an anaerobic wound into an aerobic one. The application to the wound of some oxygenating compound, such as zinc peroxide, seems advisable.

Dr. Perlstein: If an adequate dose of antitoxin is given, even if you do not get rid of spores you have protected the patient temporarily and you can give additional therapy. Once tetanus has started, however, antitoxin probably has little effect upon the course of the disease. Penicillin appears to be the most efficacious antibiotic for these infections, although culture and sensitivity studies are difficult to obtain.

Dr. Freeark: The most common problem facing the interns and residents on the surgical wards is the patient who demonstrates a degree of allergy to skin testing using a dilution of antitoxin. What should we do in such a case — omit the dose of antitoxin or take a chance that the allergy is not severe?

Dr. Perlstein: If I had a patient with tetanus who had a positive skin test, I would not deny that patient antitoxin. I would use the ordinary technique for desensitization—specifically, small gradually increasing doses. But I would certainly give him the antitoxin. I might cover it with adrenalin or cortisone but I would give it. For prophylaxis in the allergic patient, you have to use your judgment as to whether this is likely to be a wound contaminated with tetanus organisms. If it occurs in a farmer, then give it to him prophylactically. If it happened to a child in his home and there appears to be good control of his infected area locally — and the boy is a severe asthmatic with a strong allergic history — then I think I would give toxoid or nothing at all.

Dr. Freeark: That seems reasonable but what we would like to know is what to do with the asthmatic child who got his wound in a stable and did not receive his primary immunization as an infant?

Dr. Perlstein: I would give him the antitoxin but I would use the desensitization technique.

Dr. Joseph Greengard (Director, Pediatric Education, Cook County Hospital): All of us

who have practiced for a long time have had experience with tetanus and our attitude is influenced by our experience. I had a case of serious tetanus in a child who had had a burn, and whose physician gave him 1,500 units of antitoxin with subsequent urticaria. The child was told by that physician never, under any circumstances, to let anybody give him another dose of tetanus antitoxin. Some years later, this boy fell off his bicycle and sustained an open fracture of the forearm. The mother told the attending physician of the previous physician's advice and antitoxin was not given. The boy got tetanus and died in about four weeks. So I think you are taking a terrible chance if you do not give it.

I feel bothered about the usually recommended dosage and about the occasional omission of prophylactic antitoxin. At least 5,000 units of antitoxin should be given. As to the use of toxoid, I did some work on this in the early days of diphtheria immunization which demonstrated that freely circulating antitoxin interfered with the development of active immunity on attempted vaccination with toxoid. The degree of interference depends upon the potency of the antigen or toxoid. However, we disregard this pretty much in our routine immunizations. We give toxoid early in life, and in diphtheria, the child may have free antitoxin circulating from the mother's serum. With potent antigens, you get a pretty good result despite the fact that there is freely circulating antitoxin. In general, I object to a combination of the two medications.

As far as wound care is concerned, I might cite an informative experience. I was called to care for a patient where a surgeon was involved also. The surgeon had been impressed with this business of not debriding the wound. I do not think you should do too wide a debridement, but there is a reasonable way of taking care of wounds. This surgeon would not touch the wound of this child who had clinical tetanus. The patient eventually came to postmortem and in the wound there was a sliver of wood from which tetanus organisms were cultured. You cannot tell me that is good surgery. You have to use your head about these things, and not lay down dogmatic rules.

Question: Does a wheal and flare reaction to intradermal antitoxin always mean the patient is allergic to the material?

Dr. Perlstein: The fact that you have a positive skin test to serum does not mean that that

patient will get a systemic reaction to antitoxin. It should alert you to its likelihood, however.

Dr. Freeark: We have all seen many patients with wheal formation from intradermal injection, and some of us have seen fatal reactions to antitoxin. I have observed one of these and have heard of others. I am in sympathy with the physician who is reluctant to go ahead with antitoxin. Toxoid rarely causes serious reactions but it is an active immunization and the early and most lethal tetanus will not be prevented in this manner.

Dr. Perlstein: When you start giving an active immunity in many cases there is a negative phase at which time the patient is more susceptible. This would be one reason when you give toxoid to have it covered with antitoxin. May I ask were the fatal reactions you spoke of in the days of cortisone?

Dr. Freeark: The ones I know about occurred so fast that the physician could not get the icebox door open soon enough to get the cortisone.

Dr. Walter Wood: (Associate in Medical Education, Cook County Hospital): Cortisone would have little effect on acute anaphylaxis. Reach instead for epinephrine. Anaphylactic reaction from horse serum should be prevented if you use epinephrine early. Cortisone is primarily effective for serum sickness, which develops later.

Dr. Perlstein: Anaphylaxis is relatively rare, but if you gave horse serum to everybody who had a contaminated wound, the number of deaths would still be less than from tetanus.

Dr. Freeark: Who in the audience has seen death from anaphylactic shock due to antitoxin?

Dr. Frank Folk (Associate Attending Surgeon, Cook County Hospital): I saw one. The needle was no sooner withdrawn than the patient went out. There was just nothing we could do. It is the only one I have seen and I am scared.

Dr. Perlstein: Whenever tetanus antitoxin is given there should always be adrenalin available and perhaps included in the same syringe.

Dr. Freeark: Fatal anaphylactic reactions have occurred with skin testing. Apparently these individuals are so sensitive that even minute doses are lethal.

Dr. Udekwa: Are those really anaphylactic deaths?

Dr. Wood: It is a direct antibody reaction within the fluid itself. You get a violent con-

traction of smooth muscle throughout the lungs, heart, viscera, and generally through the vascular system. If the patient receives adrenalin intravenously it is rare for death to occur. If from the history, the patient is thought to be hypersensitive in spite of a negative or equivocal skin test, we would give a test dose, using up to 1,000 units of antitoxin parenterally. Both the immediate anaphylactic reaction and delayed serum sickness are dose dependent to a certain extent.

Dr. Freeark: In a patient who is allergic, it is my understanding that horse serum sensitivity not only is dangerous but it inactivates the antitoxin.

Dr. Wood: Partially.

Dr. Freeark: Does not the antigen-antibody union that brings about the reaction vitiate the protective effect against the tetanus toxin?

Dr. Wood: Antitoxin has several antibody components and you negate some of them but not the protecting factor.

Dr. Freeark: There are several other ways of passively immunizing the patient who is sensitive to horse serum. The use of antitoxin prepared from cow serum is one. If this is not available a blood transfusion from a donor who has recently been actively immunized with toxoid frequently will provide protective levels.

Case 2: Dr. Michael Stein: This 29 year old man reported to the admitting room of Cook County Hospital on March 11, 1959, with complaints of dysphagia of 12 hours' duration and inability to open his mouth for the past three hours. He had a history of heroin addiction and chronic alcoholism covering the past 10 years. He was said to have spent one month at Lexington, Kentucky, 18 months previously in an attempt at withdrawal but signed his own release. On February 1, 1959, he was on a medical ward in this hospital with anasarca of undetermined origin, and was said to have chemical evidence of active cirrhosis with possible beriberi heart disease.

When seen by a member of the Tetanus Team this man was thought to have "galloping" tetanus because he was having long spasms and was convulsing within the first 24 hours of the onset of symptoms. Tracheotomy was done and he was placed on penicillin, sedatives, Methadon®, and artificial hibernation, using the water cooled blanket and mattress. On March 11, his respirations became erratic and he was placed on the

Mörch respirator and curare. His temperature was brought down to between 84 and 88° F. By March 12, he was in a good iatrogenic alkalosis, needing only minute doses of medication to control spasms which persisted to only a mild degree. On March 14, spasms increased in frequency and soon gave way to convulsions, requiring increased medication for control. His temperature rose, despite the hibernation routine, and his blood pressure dropped to 70/30 mm. Hg. The patient expired on March 16, 1959, five days after the onset of symptoms.

This man was an addict. In the last four years our mortality rate in heroin addicts with tetanus has been 73 per cent, whereas in nonaddicts it has been 38 per cent.

Dr. Freeark: Is tracheotomy routine in all cases of tetanus, and what is standard therapy?

Dr. Stein: We use discretion about tracheostomy. Those patients who are convulsing and having spasm are tracheotomized. It also is routine in heroin addicts because of the poor prognosis. We defer it in nonaddicts, especially children who are not convulsing or are having infrequent convulsions and do not appear to have laryngeal spasm. If they suggest the need for tracheotomy, it is done promptly and without prolonged debate.

As to standard therapy in tetanus, we use tetanus antitoxin—40,000 units intramuscularly and 40,000 units intravenously, after a skin test of 1:1,000 dilution of tetanus antitoxin. In addition, if the patient has an accessible wound this is incised or debrided and the patient is put on antibiotics. Some anticonvulsive therapy is started, such as injectable Miltown® (meprobamate) 400 mg. every three or four hours. In some addicts who were not controlled by this management we have had to inject Thorazine® 25 to 50 mg. every three to four hours and barbiturates where necessary.

As to fluids and feedings, we carry them at first on intravenous fluids. If the seizures are not too severe and if the patient is not in distress, we put down a nasogastric tube and use high protein feedings plus orange juice and glucose and water in the neighborhood of 3,500 cc. a day. With the use of meprobamate it is not necessary to use the old type dark room but we strive for some reduction in daylight. The patient is given an enema on entry because fecal impaction can precipitate seizures. We avoid the use of an indwelling urethral catheter when possible be-

cause these patients often have constant spasms. They can tolerate a nasogastric tube but not a catheter. We use penicillin to counteract the possibility of infection, in the dosage of 600,000 units a day. If a complicating infection is present when they come in, we use whatever antibiotic is appropriate.

Dr. Freeark: Heroin addicts comprise an unfortunate majority of our cases. Presumably the use of contaminated hypodermic needles and failure to cleanse the skin adequately are responsible for the inoculation with tetanus organisms. It often is difficult to locate a single wound or injection site that is responsible for the production of tetanus. In some instances there are multiple abscesses throughout the entire body surface. The difficulties in managing these cases and their almost uniformly poor prognosis should emphasize the importance of active immunization of these patients for tetanus whenever they come under medical surveillance.

Question: I am concerned about the number of cases in which oral sepsis has been implicated in the development of tetanus. Many intraoral lacerations are extensive, and a large number of maxillary and mandibular fractures are compounded into the mouth. Would you advise antitoxin routinely?

Dr. Stein: The cases we presumed got their tetanus orally had had extensive extractions with severe ulcerative lesions in the sockets when they came into the hospital.

Dr. Perlstein: We have only had four cases and your guess is as good as ours.

Doctor: Out of some 200 mandible fractures that are seen at County each year, I would say less than 5 per cent are given antitoxin. I think the reason for that is that we do not like to give it unless we feel the need is definite.

Dr. Freeark: Those mandibular fractures frequently occur in young men who have been in the armed forces and have had their full tetanus immunizations. There might have been more than four cases in an older population.

Dr. Stein: Along those lines, I would like to mention a few interesting statistics from our series. In the nonaddicts, reflecting the worldwide trend, we have more male patients. But in heroin addicts we have between three and four times as many females with tetanus as we do males. Our sex figures do not follow the population trend at all in heroin addiction which is

much higher in males, and we can only surmise that the male has been in service and has had immunizations.

Dr. Freeark: Would you say a few words about what is new in the development of therapy?

Dr. Perlstein: In breaking down our material in terms of results with different treatment programs, we found that after tetanus has developed, it does not matter how you treat the patient because the mortality rate is the same. It is determined by the rapidity of onset and the interval between the first symptom and the first seizure. The use of meprobamate makes the patient more comfortable; it affects morbidity but not mortality. We do not know why tetanus patients die and until we do, treatment must remain largely symptomatic.

Hypothermia was used to cut down metabolism in these patients in hopes of keeping them alive long enough to effect some type of cure. We have had only one case properly controlled and Dr. Mörch did that. Our experience otherwise has been that of a novice with hypothermia but we are convinced that our patients, instead of dying within 24 hours, live longer. This last patient we thought would die within 48 hours but he lived five days. Why he died, I do not know. I think until we know more about the physiology of tetanus we will not know too much about treatment.

It is known that heroin addicts are more likely to have tetanus than the morphine addict. The reason is that the heroin addict has been getting stuff that is adulterated often with house dust that is obtained from vacuum cleaner bags, an obvious source of *Clostridium tetani*. Also, morphine itself has some degree of antiseptic activity. Another thing that is known is that in any addiction, the irritability of the synapse is increased. We seem to see more bulbar symptoms in heroin addiction than in nonaddicts. We find dysphagia more common in nonaddicts but I think it is because the addict does not complain about things.

Dr. Freeark: What does the anesthesiology department have to offer these patients?

Dr. E. Trier Mörch (Director of Anesthesiology, Cook County Hospital): I am sure these patients die either because of toxins in the central nervous system at the respiratory centers or because of electrolyte imbalance. If the manifestations are in the respiratory system, such as

spasm which closes the vocal cords, treatment is tracheotomy. The secondary respiratory problems are much harder to treat because there is fluid in the bronchi and excessive mucous secretion, with resultant atelectasis and pneumonia. That is difficult to treat and prevent, but there again tracheotomy—a big one—is of help. Do not close the tracheotomy wound; leave it snapping wide open. If you close it, you cannot get the next tube in. In addition, these cases require 24 hours of first class nursing care by the best nurses we have. The secretions should be sent to bacteriology to be studied for sensitivity so that the right antibiotics can be given. It is amazing to see the bacterial flora change in a few days. Humidity in tracheotomy also is important. We pass the normal air through the nose and throat and thereby moisten it before it reaches the trachea, but a surgical short-cut bypasses these membranes and exposes the trachea to drying and increased susceptibility to infection.

What fluids do you give? That depends upon the blood chemistry of the patient, which should be taken twice a day, and the urine should be kept flowing at about 50 cc./hr.

Dr. Freeark: Is respiratory arrest the indication for use of a mechanical respirator, or should it be used prophylactically?

Dr. Mörch: If a patient is doing well, leave him alone. If he is not doing well, do a tracheotomy first; that might be enough. If you are not satisfied, then bring in the respirator. Convulsions most often prevent a good result. Then you have to use narcotics enough to sedate them and paralyze the muscles with curare so we can breathe for them. Curare must be used carefully.

Dr. Freeark: What about hypothermia?

Dr. Mörch: It reduces the patient's metabolism and that of the bacteria. I am more interested in preventing hyperthermia, and that is simple to do.

Dr. Perlstein: At present we are using large tracheotomy tubes and change them every day. I want to emphasize that when you aspirate you must use a clean suction catheter. Just a little thing like that will help a great deal.

Dr. Freeark: Judging from the discussion, tetanus is truly a disease that demands teamwork. It is a tribute to the Tetanus Team that internists, pediatricians, neurologists, anesthesiologists, and surgeons can work so effectively and harmoniously in handling this difficult disease.



Repository treatment in allergy

Ever since desensitization of allergic individuals was begun, methods have been sought to decrease the frequency of visits to the physician's office. The generally used aqueous extracts require visits twice a week to every three weeks throughout the year, thus making the procedure expensive in both time and money to the patient.

Various oil bases prepared by Dr. Mary Lovelless received some acceptance, but those developed and used by Dr. Ethan Allen Brown seem on the verge of establishing a new era for the allergic patient. While Dr. Brown has given over 3,700 repository ragweed injections, he also has had extensive experience with repository grass, tree, and dust injections. He claims results equal to or better than those achieved by conventional methods and reports few reactions, none of them serious.

The principle of emulsion (repository) therapy is that a large amount of antigen may be given in a short time (often in a single dose). Because absorption is so slow, reactions become unlikely; there should never be enough antigen in the blood stream at any time to cause much trouble. This slow, constant absorption probably leads to excellent immune responses. The obvious danger is that if the antigen is not emulsified, the large quantity injected might well cause serious allergic reactions.

Two or three months before the pollinating season, the patient comes to the physician's office where skin and ophthalmic tests are performed to determine the dosage to be injected. The antigen is mixed with an oil base, epinephrine, and buffered saline. It is then further emulsified by pushing the material back and forth for 15 minutes between two 10 cc. syringes interconnected with a double hubbed needle. At the moment of emulsification, the material suddenly flows like molasses instead of maple syrup. After thorough mixing, it is examined under the microscope to determine whether it is truly emulsified.

The precautions surrounding the actual injections will be subjected to change as we gain more experience. Alcohol must be avoided, as it ruins the emulsion. We now give a small amount of epinephrine both before and after the antigen. The material is divided into up to five separate injections given at 15 minute intervals, all at the same site on the arm, the number of injections varying with the sensitivity of the patient. Before the patient leaves the office, he is given an antihistamine. Usually a steroid is administered for two or three days to try to prevent reactions. But the efficacy of these drugs along this line awaits further evaluation.

We are using repository treatment especially in patients who are first seen too close to the pollinating season to help much with conven-

tional methods, and for those who have failed to respond to aqueous extracts. In this latter group fall many who are so exquisitely sensitive that we are never able to give them sufficient amounts of antigen; these patients may well tolerate comparatively huge doses in an emulsion.

Repository injections may well be the answer for patients sensitive to only one or two allergens such as ragweed and grass. In unskilled hands, the treatment may lead to disastrous results; the same may be said of improperly prepared emulsions. Should the effectiveness of the technique really equal that of the aqueous materials, a giant step will have been taken to aid the allergic patient. Before many more seasons have passed this new method will have achieved its rightful place either in the allergist's office or in the ever mounting heap of discarded techniques; at present we are rather optimistic.

Donald L. Unger, M.D.
Leon Unger, M.D.



Modern plastic surgery

No surgical field ties in with other specialties as much as that of plastic, or reconstructive surgery. The term reconstructive surgery actually is more descriptive since no plastics or synthetic products are utilized. Only the transplantation of normal autogenous tissues can insure successful results.

Modern plastic surgery deals with replacement of all skin and subcutaneous tissues on all parts of the body. In other words, it includes closure of all cutaneous losses either by some type of primary suture of the wound edges or, when this is not feasible because of the magnitude of the surface area, covering it with a properly selected type of skin graft or flap that will satisfy the needs of the area involved.

Plastic surgeons make no claim that they can suture a laceration better than other surgeons, but they do spend more time and patience on these jobs so that a better cosmetic result may be anticipated. The specialty deals with the reconstruction of all types of facial deformities, including facial bone and jaw fractures. Facial paralysis may be improved by transplantation of fascia lata. The reconstruction of noses, orbits, eyelids, and ears is included in the plastic surgeons' work. Congenital deformities such as hare-

lip and cleft palate defects must be added. Surface deformities, whether they be birthmarks, loss of covering following burns, avulsions, or surgical excision for the treatment of cutaneous malignancy, naturally are included because skin replacement procedures frequently are indicated.

The general management of the acutely burned patient is a common problem. Not only is the early replacement of skin loss mandatory, but later correction of neglected burn scar contractions must likewise be done. The burned hand frequently presents major problems, not only with surface restoration, but with tendon replacement or transplantation as well.

In view of the wide scope involved, it is obvious that the American Board of Plastic Surgery requires a minimum of three years' training in general surgery prior to the advanced residency in plastic surgery. By so doing, the reconstructive surgeon becomes familiar with all types of anatomical problems. The basic principles of reconstruction are essentially the same, whether they involve the face or the extremities.

Since this specialty covers such a broad area, the plastic surgeon has come to function largely by co-operating with physicians working in other fields. For example, he may aid the dermatologist by the surgical excision and reconstruction of extensive skin tumors, both benign and malignant. He may help the radiologist by repairing any irradiation injuries of the skin and subcutaneous tissues that may arise incidental to adequate therapy of deep seated malignancies. He may assist the general surgeon by the reconstruction of defects produced by the surgical extirpation necessary for the cure of cancer. He may aid the ophthalmologist by reconstruction of eyelid defects or socket irregularities so that a prosthesis may be worn. He may even help the psychiatrist by eliminating certain physical deformities that are producing psychic trauma. He may aid the pediatrician by the closure of cleft lips, palates, and a myriad of other congenital anatomical abnormalities. Because of associated surface defects of the extremities, the plastic surgeon frequently aids the orthopedic surgeon and neurosurgeon by replacing cutaneous loss with a properly chosen skin graft or flap; later, underlying bone, tendon, or peripheral nerve surgery may be carried to a successful conclusion.

There are few routine or stationary problems in the field of plastic surgery. New conditions

arise constantly but the fundamental principles of repair remain the same. The individual methods of reconstruction are determined largely by the surgeon's personal imagination and individual ability.

Paul W. Greeley, M.D.

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Together we stand

The health team must stand together if it expects to survive. There is a growing tendency for organized medicine to blame the high cost of medical care on hospitals and pharmaceuticals in an effort to play down the physician and his fees. This is done in an attempt to lighten the gathering storm of public protest against the medical profession.

Blaming others is a shortsighted policy because division of opinion and internal friction is bound to encourage the government to step in. There is nothing our opponents would like better than to separate our ranks and tackle each group on the medical team individually. In the end, there will be less and less freedom in choosing physicians, drugs, and hospitals. No one member of the health team can stand alone.

Co-operation means giving and taking. The cost of medical care increased 4.5 per cent between May 1958 and May 1959, according to the Bureau of Labor Statistics. This is the largest increase for any elements in the commercial price index with the exception of transportation.

There is nothing to be gained by denying these facts or shifting the blame on to the pharmaceutical industry or the hospitals. After all, the treatment of a patient begins and ends with the physician. He prescribes the remedies, determines the length of the hospital stay, and the amount of laboratory workup.

Rising costs usually make industries tighten their belts or try for greater efficiency. We should concentrate on lower costs within our present framework without sacrificing the quality of medical care.

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The superior man will watch over himself when he is alone. He examines his heart that there may be nothing wrong there, and that he may have no cause of dissatisfaction with himself. — *Confucius*

Sports Medicine Congress

A Sports Medicine Congress will be held in conjunction with the Pan American Games in Chicago, September 1-2. The meetings will be conducted at Thorne Hall, Northwestern University, Chicago campus. Participants will include many authorities on athletic training, conditioning, and injuries.

Competitive athletics is here to stay and there is need for scientific research and guidance, considering the popularity of sports. There are few fields in which so many misconceptions exist, especially on diet, training, injuries, and on the effects of strenuous exercise of the heart, circulation, and longevity.

The speakers include the celebrated Paul Dudley White, dean of American cardiologists; and Warren Guild and James R. Wilson, authorities on diet. Injuries to the lower extremities will be discussed by William Paul, chairman of the department of physical medicine at the University of Iowa and physician to last year's Big Ten football champions, teamed with Edward Compere, chairman, department of orthopedic surgery, Northwestern University.

Other speakers are Irwin Schulz, physician to the Milwaukee Braves; John O'Connor, associate, bone and joint surgery, Stritch School of Medicine; and Stephen Reid, associate professor of surgery, Northwestern University and team physician to the Northwestern Wildcats.

The American College of Sports Medicine will be represented by Allen J. Ryan who will speak on the prevention and treatment of athletic injuries. L. F. Bishop and J. B. Wolffe will conduct a round table discussion on the effects of physical training on the cardiovascular system. Other discussion groups will be led by nationally known trainers, coaches, physiologists, and physical educationists. Topics include new trends in conditioning, especially interval training, which is said to be responsible for new records in distance running.

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Illinois gains two delegates to AMA in section elections

Illinois picked up two delegates to the AMA House of Delegates in recent elections by scientific sections of the AMA. Dr. Edward L. Compere, Chicago, will represent the Section on Orthopedic Surgery, and Dr. Harry F. Dowling,

Chicago, will represent the Section on Experimental Medicine and Therapeutics. Their two-year terms will begin January 1, 1960.

Other Illinois physicians elected to section positions are:

Dermatology — Dr. Stanley E. Huff, Evanston, representative to scientific exhibit.

Diseases of the Chest — Dr. Edward R. Levine, Chicago, representative to scientific exhibit.

Gastroenterology and Proctology — Dr. Joseph B. Kirsner, Chicago, chairman.

Internal Medicine — Dr. Wright R. Adams, Chicago, secretary; Dr. Henry T. Ricketts, Chicago, representative to scientific exhibit.

Laryngology, Otolaryngology, and Rhinology — Dr. Paul H. Holinger, Chicago, chairman.

Nervous and Mental Diseases — Dr. Benjamin Boshes, Chicago, representative to scientific exhibit.

Obstetrics and Gynecology — Dr. H. Close Hesseltine, Chicago, vice chairman; Dr. Frederick H. Falls, River Forest, representative to scientific exhibit.

Ophthalmology — Dr. Frank W. Newell, Chicago, representative to scientific exhibit.

Pathology and Physiology — Dr. Lester R. Dragstedt, Chicago, vice chairman; Dr. Samuel A. Levinson, Chicago, representative to scientific exhibit.

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Medicine on postage stamps

Among recent issues of postage stamps dealing with the medical profession were the following:

Argentina: A 1.00 plus 0.50 stamp provided funds for the fight on leukemia; it shows the profile of a child receiving life-saving blood in her finger.

Germany (West) — A 20pf stamp honors the 500th anniversary of Cardinal Nicholas Cusanus, founder of St. Nicholas Hospital.

Monaco — A 100f value was issued to mark the inauguration of the hospital bloc, "Poly-clinique Princesse Grace."

Philippines — Dr. Jose Rizal, physician and national hero, is the subject of the 10th stamp in the Famous Filipinos series.

Spanish Guinea — Digitalis and the castor oil plant are pictured on two charity stamps.

Yugoslavia — A set of nine stamps shows different medicinal plants.

This year marks the 100th anniversary of the Battle of Solferino, Italy, the horror of which

led to the founding of the Red Cross movement by Jean Henri Dunant, Swiss humanitarian. The event has been commemorated postally by many countries recently, including the following:

Belgium — Three high values in a six-stamp set bear the portrait of Dunant with a pair of stretcher bearers carrying a wounded soldier; three low values have a Red Cross and drop of blood falling on a heart, symbolic of the blood bank program.

Denmark — Two values mark the centenary of the Battle of Solferino.

Ethiopia — Three 1955 Red Cross stamps were overprinted to mark the centenary.

Iran — Two commemoratives show the flags of the Red Cross and its Moslem equivalent, the Red Crescent.

Italy — Five stamps commemorate the Risorgimento battles of 1859, two being surtaxed for the benefit of the Red Cross.

Japan — A 10 yen Red Cross stamp pictures nurses carrying a wounded soldier on a stretcher.

New Zealand — A Red Cross flag against a background of two hemispheres is the motif of a surtaxed Red Cross commemorative.

Sweden — A surtaxed semi-postal bears the portrait of Dunant.

Yugoslavia — Two surtaxed Red Cross stamps symbolize the assistance given to families.

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Editorials from other journals

The low cost of murder

Some time ago a national television network presented a program in which a noted attorney made an impassioned plea for the abolition of capital punishment because he did not believe it deterred people from committing murder. We believe that those who murder in the heat of passion never consider the possibility of punishment by death for their action; their crimes are impulsive and without thought. Likewise, this highest penalty will not end murder for revenge or profit; killers of this type believe they have planned so skillfully and are so well protected they will not be discovered and will escape all punishment.

A few days after this emotional television performance I was astonished to hear a radio commentator give his opinion that the appearance of the distinguished jurist, and the arguments

he advanced, would soon lead to abolition of the death penalty on a nationwide basis. I cannot believe the American public is so emotionally immature it will so readily be swayed as predicted.

In presenting his highly emotional plea, the lawyer based his arguments primarily on the fact that murderers who received the death sentence did not cower and cringe in fear as execution approached and hence the sentence did not serve as a deterrent. His argument was given great dramatic impact by the showing of a condemned man, confidently expecting a stay of execution, to the very moment when the lethal current passed through his body. The jurist argued that since the condemned murderer continued to believe that he would be pardoned until the very last minute, fear of execution does not act as a deterrent.

The fact that the condemned criminal did not writhe in fear and trembling as the days before his execution went by indicates nothing more than the action of the protective mechanism built into man by a merciful God, a God with whom the killer usually has made his peace in the final days of his life. This same merciful device which protects the killer awaiting death is observed daily by physicians who minister to those who suffer from chronic, fatal diseases. It is not unusual for a patient dying of pulmonary tuberculosis, cancer, or other disorder to sincerely continue to make plans for months ahead, with what at times are often the last few breaths of life. This shield of mercy seems to be granted

those whose days are numbered. From the stark reality of impending death they turn to a pathologically protective hope.

The eminent advocate began his presentation with a scene in a prison, at a time when all avenues of hope appeared to have been closed to the convicted man. The jurist made much of the fact that the condemned prisoner continued to hope, to dispatch letters to the governor, and to berate his attorney who, understandably, radiated some degree of gloom. The narrator might have presented a courtroom scene revealing the anguish of the prisoner and his family when the death sentence was pronounced. Because so many escape the death penalty, it is natural for a prisoner sentenced to death builds up hope that he, too, will "beat the rap."

Whenever "life in prison," the alternative to "death," is pronounced, the murderer and his family have reason to be jubilant for they have scored a victory. We appreciate that there is good cause for cheering when one is sentenced to "life in prison" rather than "death," because life imprisonment has become a farce in our penal system. Often a criminal serves longer sentences for house-breaking and robbery than he does when sentenced to "life in prison."

If—more often—the penalty "death in the electric chair" meant just that, and the sentence of "life imprisonment" was not just a phrase, these penalties might then have a more definite deterrent effect upon our rising murder rate. *Samuel E. Hadden, M.D. The Low Cost of Murder. Philadelphia Med. June 19, 1959.*

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Summary of ISMS Legislative Program

The curtain dropped June 30, 1959, on the 71st General Assembly and what must go down in history as one of its most productive sessions, from the standpoint of Illinois Medicine. Your Society not only saw enacted its entire legislative program into law but was able to oppose successfully all legislation that might be considered inimical.

Medical Research

Your society offered HB6 and HB156 which would permit a person to give his body or any part thereof to medical research, a tissue bank, or teaching institution either by will, or other written instrument, attested to by two witnesses. The bills provide that in the event the body is taken or a tissue transplant is made that the executor of the estate or institution receiving the same shall not be liable in suits brought by next of kin for mutilation of the body. These bills were both passed and signed by the Governor. The bills were reviewed by the appropriate committee of the Chicago Bar Association. The Illinois State Bar Association took no position.

Doctor-Patient Privileged Communication Established

Your society arranged for the introduction of HB1280 which sets up a prohibition on the testimony of physicians in court cases unless the patient waives the privilege either expressly or impliedly by some affirmative action. The exceptions to the privilege are: 1) murder, 2) malpractice suits against the physician, 3) abortion, 4) mental illness hearings, 5) suits brought by or against the patient, 6) express waiver, and 7) will contests. As originally submitted the implied waiver covered under 5 above was limited to waiver only when suit was brought by the patient. The implied waiver provided also that the medical testimony has to be relevant to the physical or mental condition of the patient in dispute. However, this section was amended in the Senate and the

relevancy test was stricken and the privilege will not apply where suits are brought by or against the patient. As limited as this privilege may be, as finally passed by the legislature, it is believed that it will protect disclosures made to a psychiatrist, and it protects disclosures made to a physician in the nature of a confession of a crime other than murder or abortion.

"Psychiatrist" Defined

We endorsed HB1231 and HB1232 which will provide a needed definition of a "psychiatrist" under one section of the criminal statutes and fix a method of payment of the psychiatrist's fee under 2 sections of the criminal statutes for services rendered in aid of the court for examining defendants charged with sex crimes.

Toxicological Laboratory

SB159, proposed by ISMS, will establish needed toxicological laboratory services in the State Department of Health to assist coroners and law enforcement officials in determining the cause of death suspected to have been accomplished by poison. The two laboratories (one in Chicago and one in Springfield) also will conduct examinations of soil, air, and water for radiation hazards and pollution.

Physicians' Lien

SB1001, offered by ISMS, will create a lien in favor of physicians up to one-third of the value of a claim or cause of action due an injured person, provided the physician serves notice and makes his records available for examination.

"Professional Person" Redefined

SB413 proposed by ISMS redefines the term "professional person" under the Visual Limitations Act to limit the persons designated to those persons licensed under the Medical and Optometric Practice Acts.

Licensure Standards Improved

All of the ISMS's suggestions to the Medical Practice Act Commission for the improvement of licensure standards in Illinois were passed. The legislature approved SB665 which changes

the provisions pertaining to the elapsed time of the medical course, to permit medical schools to adopt the quarter system. SB666, which provided a citizenship requirement before full licensure, was killed in the House License and Miscellaneous Committee but subsequently was adopted when the House and Senate approved the measure by amendment to another bill. SB667 permits physicians to come to Illinois for purposes of residency training to take the medical examination. SB668 limits the number of medical examinations a physician may take to five unless he takes additional training thereafter, as specified by the Medical Examining Committee. SB669 increased the penalties for the illegal practice of medicine, particularly for repeated offenses which carry a mandatory six months jail sentence. SB670 provides for enforcement of the Medical Practice Act by court injunction. SB671 provides that the State Health Department shall require interns in hospitals licensed by the department to be licensed under the Medical Practice Act. SB672 designates an assistant attorney general to the Department of Registration to assist in the enforcement of the Medical, Dental, Nursing, and Optometric Practice Acts. SB673 provides for notice of lapse of a medical license where re-registration has been overlooked. SB968 provides the sum of \$25,000 to pay the salary and expenses of the assistant attorney general provided for by SB672.

Miscellaneous

Other measures of interest to medicine adopted include HB329 which simplifies the bookkeeping on state reimbursement payments for TB care and eliminates the need for deficiency appropriations. Also passed was HB626 which declares that IPAC payments made to physician members of the legislature do not constitute a conflict of

interest. A number of bills suggested by the Narcotics Commission were adopted, including the proposals of the ISMS to permit the treatment of narcotic addicts in private hospitals and sanatoria; to eliminate provision under section 23 of the Narcotic Acts for revocation of M.D. license for failure to co-operate with state narcotics inspectors. A defect in the Coroner's Law was remedied by the enactment of HB1465 which requires a coroner's permit to cremate. A Dangerous Substances Labeling Act and a new drug act also were passed. A number of legislative commissions were authorized, including a Laboratory Technicians' Study Commission (SB-891). It is doubtful, however, that many of these will be created in view of the shortage of funds.

During the session your society played an important if not major role in the defeat of the following legislation: SB46 et al. to reorganize departments of state government, including the transfer of the licensing function to the Department of Finance; HB188 to make the sale of narcotics to minors subject to a mandatory life sentence; HB1118 which would have imposed a 2 per cent tax on premium income of nonprofit hospital and medical plan corporations as well as private insurance corporations underwriting medical, health, and hospital insurance; HB564 which would have labeled auto license plates issued physicians, "M.D."; HB1063, 1064, 664, and 1321 which would have changed the basic structure of the Coroner's Act; HB1017 which would have prohibited the use of silver nitrate in the eyes of newborns; HB525, an antivivisection bill; and amendments to exclude naprapaths from injunctive enforcement of the Medical Practice Act.

WALTER L. OBLINGER
Associate Counsel

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Questions and Answers on Narcotic Act

Q: Can a physician treat an addict?

A: Yes.

Q: How and where?

A: A physician may prescribe for, furnish to, or administer narcotic drugs to his patient when the patient is suffering from a disease, ailment, injury, or infirmity attendant upon old age. A physician shall prescribe, furnish, or administer narcotic drugs only when he believes in good faith the disease, ailment, injury, or infirmity requires such treatment, and only in such quantity and for such length of time as are reasonably necessary; provided, however, that a physician may treat any addict as such who is confined to any city or county jail or penitentiary or any county, state, or federal hospital or any hospital approved by the division for the treatment of such addiction.

Q: What are the formal requirements for narcotic prescriptions?

A: A prescription for narcotic drugs shall be dated as of and signed on the date when issued, and shall bear the full name and address of the patient and the name, address, and registry number of the practitioner. A physician may sign a prescription in the same manner as he would sign a check or legal document; for instance, J. H. Smith, John H. Smith, or John Henry Smith. Prescriptions should be written with ink or indelible pencil. The refilling of a prescription for taxable narcotic drugs is prohibited.

Q: What must a physician do when he changes the location of his office?

A: A physician registrant who changes the location of his office shall, within 30 days, execute a new return on Form 678, marking it "Revised Registry." The return shall set forth the date of change and the new address, and be forwarded with the official tax stamp to

the Director of Internal Revenue, who issued the stamp for recording the change.

Q: Is the special tax stamp required to be posted?

A: Yes. Under Federal law, every special tax stamp issued to a taxpayer must be kept posted conspicuously on the premises where the business is operated.

Q: Where should blanks for narcotic drugs be kept?

A: A physician's prescription blanks should be most carefully safeguarded and never left where persons who may be drug addicts will have an opportunity to take them, prepare, and have filled forged narcotic prescriptions. A physician's official order forms should likewise be safeguarded, and great care should be exercised by the physician in keeping his stock of narcotic drugs secure from robbery or pilfering. The medicine case of narcotics should never be left in an unattended automobile, if avoidable.

(Recent legislation makes it a violation of the law for any unauthorized person to possess official prescription blanks.)

Q: Is it permissible for partners to use the same set of official prescription blanks?

A: No. The prescription blanks issued by the division shall be furnished in serially numbered groups of 100 forms, each in triplicate, and shall not be transferable.

Q: Should each partner be individually registered with the Director of Internal Revenue to be lawfully entitled to prescribe, dispense, or administer narcotics?

A: Yes. Any two or more practitioners who are partners or operate a clinic and are registered in Class 4 under the Federal narcotic laws, may dispense and administer narcotic drugs obtained on official written order forms, under such Class 4 classification, to their patients within the confines of the offices of the

partnership or clinic; provided that each practitioner is individually registered with the District Director of Internal Revenue.

Q: What must a physician do in case narcotics or prescription blanks are lost or stolen?

A: Every practitioner should report immediately to the local law enforcement authorities, and to the Division of Narcotic Control, Springfield, Illinois, narcotic drugs or prescription blanks that are lost or stolen. Such report should contain the kind and quantity of narcotic drugs, serial numbers of prescriptions, and the date of the loss or theft. A report of narcotics lost or stolen also should be sent to Mr. George M. Belk, District Supervisor, Federal Bureau of Narcotics, 817 New Post Office Building, Chicago 7. The loss of prescription blanks need not be reported to Mr. Belk, since this is a State matter.

Q: What is the proper procedure in case a physician terminates practice or moves out of Illinois?

A: In the event a practitioner terminates practice or moves out of Illinois, the unused supply of prescription blanks issued to such practitioner should be returned to the Division of Narcotic Control, Springfield.

Q: If a physician, after starting to write a narcotic prescription on the official prescription blank, decides to void the prescription, what should he do with the prescription?

A: He should write the word "void" across the

face of the official prescription blank. Such voided prescription blank should be retained in the book.

Q: How long must narcotic records be kept?

A: The official prescription blank books, containing copies of the official prescription blanks issued and the records of narcotic drugs administered, dispensed, or professionally used, should be retained by the practitioner for two years.

Q: In the event a practitioner has a patient who warrants the use of narcotic drugs to allay pain and suffering incident to disease, ailment, injury, or infirmity, is he required to report such facts to the Division of Narcotic Control, Springfield?

A: No. A practitioner may, in his discretion, report such facts in writing. The Division has report forms that will be furnished, free of charge, for use by the practitioner, if desired. This form is not required; it is optional.

The Committee on Narcotics will be happy to answer additional questions concerning the use of narcotics under the new state law. They will be answered in this column in forthcoming issues.

Address your queries to the Editors of the Journal or to Jacob E. Reisch, M.D., chairman, committee of narcotics, Suite 1909, 185 N. Wabash Avenue, Chicago 1.

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Vitamin K during pregnancy

It is now evident that vitamin K in large doses may produce hyperbilirubinemia, kernicterus, and even death in premature infants. Since placental transmission of vitamin K has been established, its routine administration to mothers in labor to protect the infant from possible hypoprothrombinemia should be revalu-

ated by every obstetrician. Its use certainly should be avoided if labor is premature or delivery imminent. Adequate protection of the infant can be accomplished safely without risk of bilirubinemia, by giving 1 mg. of vitamin K parenterally at birth. *Bruce B. Rolf, M.D. The Work of an Rh Committee. California Med. June 1959.*

CORRESPONDENCE



Chicago Medical Society postgraduate courses

The Chicago Medical Society will hold two postgraduate courses in obstetrics and gynecology, at the Morrison Hotel, October 26-30, and in pediatrics, at the Morrison Hotel, November 2-6.

The course in obstetrics and gynecology will cover modern maternity care, complications of pregnancy and labor, postpartum complications, functional disturbances of the reproductive organs, and cancer of the reproductive organs.

Subjects of the course in pediatrics will include: newborn disorders, infectious and metabolic diseases, hematology, cardiology, neurology, emotional and developmental problems, and pediatric surgery.

The fee for each course is \$75. Further information may be had by writing to the Chicago Medical Society, 86 East Randolph Street, Chicago 1.

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American College of Surgeons lists sectional meetings

The American College of Surgeons has announced the following sectional meetings for 1960:

Louisville, January 21-23, Brown Hotel; Dr. Rudolf J. Noer, local chairman.

Boston, February 29-March 3, Statler Hilton

(surgeons' headquarters) and Sheraton-Plaza (nurses' headquarters); Dr. Claude E. Welch, local chairman, and Dr. Anne Kibrick, nurses' program chairman. For surgeons and nurses.

Colorado Springs, Col., March 21-23, Broadmoor; Dr. Edward H. Vincent, local chairman.

Portland, Ore., March 28-30, Sheraton-Portland Hotel; Dr. Millard S. Rosenblatt, local chairman.

Minneapolis, April 11-13, Hotel Leamington; Dr. Horace G. Scott, local chairman.

Rochester, Minn., April 14, Kahler Hotel; Drs. Edward Starr Judd Jr. and Joseph H. Pratt, co-chairmen.

Clinical Congress, San Francisco, October 27-November 1.

Address inquiries to Dr. H. O. Saunders, 40 East Erie Street, Chicago 11.

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American Hospital Assoc. to meet in New York

The American Hospital Association will hold its 61st annual meeting in New York, August 24-27, its first in that city since 1911.

The program will include such topics as providing health care for the aged, future of prepayment plans for hospital care, progressive patient care, hospital services, nursing education, and hospital operation.

There also will be meetings of several allied groups, including the American Association of

Hospital Consultants, American Association for Hospital Planning, American College of Hospital Administrators, and American Association of Nurse Anesthetists.

About 500 exhibits will show new equipment and supplies.

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Nursing home group to meet

The American Nursing Home Association will hold its 8th national convention at the Morrison Hotel, Chicago, October 6-9. The speakers will include representatives of government, public health, public service, and public relations. The convention theme will be "Public Relations is What You Do."

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Surgeons of world to speak at I.C.S. annual congress

Leading surgeons from many parts of the free world will present scientific papers at the 24th annual Congress of the North American Federation, International College of Surgeons, to be held at the Palmer House, Chicago, September 13-17.

Among the special features will be military reports on medical operations and research in climatic and environmental extremes, to be presented by six Navy medical officers. Their reports will cover the problems of space flights and prolonged stays in frigid zones, tropical climates, or under water.

Prof. Dr. Andre Thomas of the Faculty of Sciences, the Sorbonne, Paris, inventor of an artificial pulmonary membrane, will give a demonstration of progress in artificial cardiopulmonary circulation and the physiological and surgical results obtained from the use of his instrument.

The annual Acuff Memorial Lecture will be presented by Dr. Sten Friberg, professor of surgery, University of Stockholm, Sweden. Among other speakers will be Senator Joseph Lister Hill (D. Ala.) and Senator Hubert H. Humphrey (D. Minn.).

The North American Federation comprises the United States, Canada, Mexico, Cuba, Haiti, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, and Panama.

Further information may be had by writing to the Secretariat, International College of Surgeons, 1516 Lake Shore Drive, Chicago 10.

Dr. John I. Brewer, Chicago, to address ACOG meeting

Dr. John I. Brewer of Chicago, president of the American College of Obstetricians and Gynecologists, will be the guest banquet speaker at a District II meeting of ACOG, to be held in the Waldorf Astoria Hotel, New York, September 24-26.

The scientific program will include general clinical sessions and breakfast and luncheon conferences.

The College also announced that District VI (Illinois, Iowa, Minnesota, Nebraska, North Dakota, South Dakota, Wisconsin, Manitoba, and Saskatchewan) will hold a meeting at the Sheraton-Fontenelle Hotel, Omaha, October 15-17.

Other district meetings will be held as follows: Equinox House, Manchester, Vt., September 3-5; Chase Hotel, St. Louis, September 18-19; Hotel Hershey, Hershey, Pa., October 9-10; Americana Hotel, Bal Harbour, Fla., October 29-31; Royal Hawaiian Hotel, Honolulu, November 15-21; Statler Hotel, Detroit, November 19-21.

Further information may be had by writing to Mr. Donald F. Richardson, executive secretary, ACOG, P. O. Box 749, Chicago 90.

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Physicians-schools meeting

The seventh annual National Conference on Physicians and Schools, under the sponsorship of the AMA, will be held at the Moraine-on-the-Lake Hotel, Highland Park, Ill., October 13-15.

Further information may be had from the Department of Health Education, AMA, 535 North Dearborn Street, Chicago 10.

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Interstate Postgraduate Medical Assoc. to meet

The Interstate Postgraduate Medical Association of North America will hold its 44th scientific assembly at the Palmer House, Chicago, November 2-5.

Besides lecture programs, to be presented by prominent physicians from all parts of the country, there will be breakfast conferences, teaching programs, and scientific exhibits.

For further information, write to Mr. Roy T. Ragatz, executive director of the association, Box 1109, Madison 1, Wisconsin.

A.C.S. to hold clinical congress in Atlantic City

The American College of Surgeons will hold its 45th annual Clinical Conference in Atlantic City, September 28-October 2. An attendance of more than 10,000 fellows and guests is expected.

Included in the program will be nine post-graduate courses, panel discussions, symposia, research reports, motion pictures, color closed-circuit telecasts from Bellevue Hospital in New York, cine clinics, and scientific and industrial exhibits.

Dr. Newell W. Philpott of Montreal, president of the college, will preside at the opening evening session, at which Dr. Dean Rusk, president of the Rockefeller Foundation, will speak. The annual convocation will take place on the final evening.

Medical students from 36 medical colleges will be guests as an educational contribution of the College. They will attend a number of special sessions in addition to the regularly scheduled lectures, discussions, and demonstrations.

The students from the five Chicago medical schools, selected by vote of their classmates, are: Earl F. Bracker, Northwestern; Alan A. Neuman, Chicago Medical; Robert Porter, University of Chicago; Richard C. Stalzer, Loyola; Glen E. Tomlinson, University of Illinois.

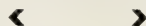
For further information, write to Dr. Paul R. Hawley, director, American College of Surgeons, 40 East Erie Street, Chicago 11.



Twenty-three clinics for crippled children listed for September

Twenty-three clinics for Illinois' physically handicapped children have been scheduled for September by the University of Illinois, Division of Services for Crippled Children. The Division will count 18 general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical, social, and nursing service. There will be two special clinics for children with cardiac conditions, one for rheumatic fever, and two for cerebral palsy. Clinicians are selected from private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

- September 2 — Carmi, Carmi Township Hospital
- September 2 — Champaign, McKinley Hospital
- September 2 — Hinsdale, Hinsdale Sanitarium
- September 2 — Rock Island (Cerebral Palsy), Foss Home, 3808 8th Avenue
- September 3 — Sterling, Community General Hospital
- September 8 — East St. Louis, St. Mary's Hospital
- September 8 — Peoria, Children's Hospital
- September 9 — Joliet, Silver Cross Hospital
- September 10 — Anna, County Hospital District
- September 10 — Springfield, St. John's Hospital
- September 11 — Chicago Heights (Cardiac), St. James Hospital
- September 15 — Alton, Alton Memorial Hospital
- September 16 — Evergreen Park, Little Company of Mary Hospital
- September 16 — Jacksonville, Our Saviour's Hospital
- September 17 — Elmhurst (Cardiac), Memorial Hospital of DuPage County
- September 17 — Rockford, Rockford Memorial Hospital
- September 22 — Peoria, Children's Hospital
- September 23 — Aurora, Copley Memorial Hospital
- September 23 — Springfield (Cerebral Palsy), Memorial Hospital
- September 24 — Decatur, Decatur-Macon County Hospital
- September 24 — Sparta, Sparta Community Hospital
- September 29 — Effingham (Rheumatic Fever), St. Anthony Hospital
- September 30 — Centralia, New St. Mary's Hospital



Conference on trichinosis

An International Conference on Trichinosis will be held in Warsaw, September 12-13, under the auspices of the Polish Parasitological Society. The occasion is the 100th anniversary of Zenker's discovery. Papers will be presented in English as well as in other languages.

Provide postgraduate course in general surgery

Another intensive two-week postgraduate course in general surgery will be provided by the United States Section, International College of Surgeons, in co-operation with the Cook County Graduate School of Medicine, Chicago, beginning November 2.

The courses will be presented at the graduate school and in the wards and operating rooms of the Cook County Hospital. The program will be under the supervision of the hospital's surgical staff and will include illustrated lectures, motion pictures, anatomy demonstrations, operative clinics, and practice surgery by the participants on anesthetized dogs.

Consideration will be given to surgical technique, surgical complications, and management of the surgical patient, as well as to an intensive review of the basic sciences in relation to clinical surgery. The course will comprise 78 hours of instruction, including 20 hours of surgical anatomy on the cadaver. Tuition is \$150. Participants will be eligible for formal (category I) credit from the American Academy of General Practice.

Applications should be addressed to Mr. John W. Neal, registrar, Cook County Graduate School of Medicine, 707 South Wood Street, Chicago 12, or to Dr. Ross T. McIntire, executive director, International College of Surgeons, 1516 Lake Shore Drive, Chicago 10.

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Papers on goiter sought

Papers with a 15 minute limit, to be presented at the fourth International Goiter Conference in London, July 5-9, 1960, are being asked for by the American Goiter Association. An abstract of not more than 400 words should be sent by December 1 to Dr. J. E. Rall, National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, Bethesda 14, Md.

Dr. Warren H. Cole of Chicago is president of the American Goiter Association, which has headquarters at 149 1/2 Washington Avenue, Albany 10, N. Y.

Conference on zoonoses to be held in Iowa City

The second annual Midwestern Interprofessional Conference on Diseases of Animals Transmissible to Man will be held at Iowa City, September 10-11, under the sponsorship of the State University of Iowa College of Medicine and the Iowa State Department of Health.

The conference will cover brucellosis, rabies, leptospirosis, Q fever, staphylococcal diseases, and other subjects. Presentations by physicians and veterinarians will emphasize the public health aspects and recent advances in this field.

For further information, write Dr. Ian Maclean Smith, University Hospitals, Iowa City.

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World medical education conference to be held

Pooling of international effort in behalf of improved health the world over will highlight the second World Conference on Medical Education in Chicago, August 29-September 4.

Medical educators from 50 countries will participate in the meeting, sponsored by the World Medical Association, World Health Organization, Council for International Organizations of Medical Sciences, and International Association of Universities. President Eisenhower is patron of the conference.

There will be 125 speakers. Although Russia is not a member of the WMA, that country is expected to send a delegation and to provide at least two speakers. Poland, another nonmember, also will be represented.

Further information may be had from the WMA, 10 Columbus Circle, New York 19.

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Offer electrocardiology course

The University of Nebraska College of Medicine is offering a three-day postgraduate course in advanced electrocardiology in Omaha, September 28-30. Write to the University, 42nd and Downey Streets, Omaha 5, for information.

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HEART MONITOR AND CRASH CART

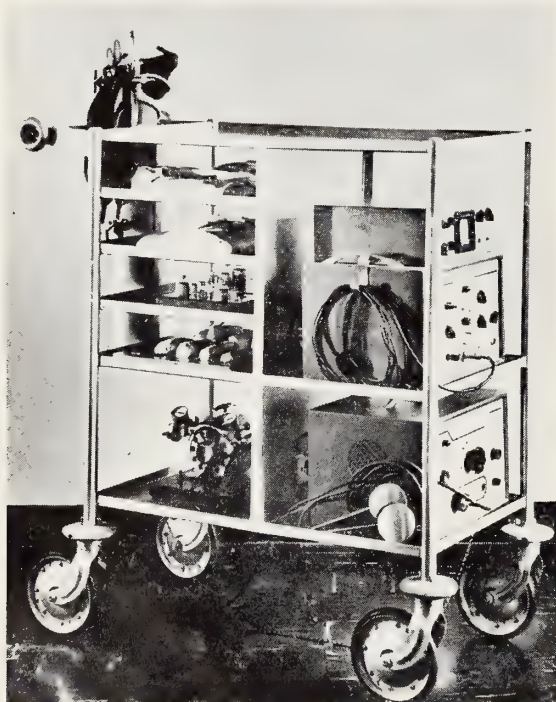
A new heart monitor weighing only six ounces and measuring less than five inches was introduced by the National Cylinder Gas Division of Chemetron Corporation at the AMA meeting in Atlantic City. Developed by Dr. William F. Veling, for use during surgery, the monitor is strapped to the patient's forearm and emits beeping signals, translating the electric wave activity of the heart. The aim is to reduce surgical risks

by signaling the physician instantly when the pulse indicates need for heart massage or other resuscitation measures.

A fully equipped cardiac crash cart for emergency treatment of cardiac arrest is now in use in a New York hospital. It was designed and built by Colson Corporation and contains all the modern devices used for emergency cardiac care. One item is an internal-external pacemaker monitor to provide stimuli for initiating spontaneous activity when the heart stops beating. It also contains a defibrillator, a suction pump for aspiration of mucus and vomitus, and various size syringes for drug administration. Other supplies may include a thoracotomy set for exposing the heart to permit massage, electric stimulation, or drug therapy; oxygen; and an endotracheal tray containing equipment for a tracheotomy.

MODERN HOUSING FOR AGED

Toledo's residents can't wait to grow old. A unique six story penthouse apartment building for young oldsters is being constructed in a new retirement city. The Crestview Club apartment, sponsored by Flower Hospital, is designed to meet the needs of the oldster who wants to maintain his independence and yet be free of maintenance chores. In addition, around the clock nursing service is available, as well as health care during illness. They use catchy advertisements like "distinguished-daylighted apartments with built-in health security." Studio apartment prices begin at \$9,250. The rental is \$150 a month



Crash cart.

which includes meals, utilities, and maid and health services.

HEARING AID

The new Michigan Avenue display salon of Zenith Radio Corporation operates a service center for testing all types of hearing equipment. They also have a sales center for their own hearing devices.

VIRGIN ISLANDS — POLLEN FREE

A haven for hay fever sufferers is St. John, Virgin Islands, which is completely free of ragweed. On the basis of a pollen survey by the aerobiologist, Oren C. Durham, the island has been given a zero rating in the National Hay Fever Index. Comparable figures in other areas are: New York 25, Chicago 65, Washington, D. C. 41, and San Francisco, 0.2.

PHARMACEUTICALS

Alphosyl is a new tar-allantoin combination for the treatment of psoriasis. It was used by a group of Cincinnati physicians on 62 cases; 29 were completely cleared and another 26 almost completely cleared. In the remaining seven, more than half the psoriatic skin areas healed.

Lederle Laboratories announced recently that Kynex sulfamethoxy-pyridazine shows promise as a prophylaxis in rheumatic fever. A single oral dose protects for a whole week. Preliminary studies have shown that the drug is relatively safe to use. But several years may elapse before its prophylactic value can be ascertained.

Fleet's enema has competition. Winthrop Laboratories have introduced Lavema for use as a cleansing enema and as a radiopaque enema adjuvant. The new product comes in powder form and when added to an enema solution produces a stimulating solution that removes gas and feces from the large bowel.

Nardil, Warner-Chilcott's new mood leveler, is getting considerable play in the press and medical journals. It is estimated that 6,500 patients have been treated with the drug by more than 600 physicians without evidence of liver or other serious toxicity. Time will tell.

Actase Fibrinolysin is a newly isolated fraction of human blood that the Ortho Research Foundation is recommending for the treatment of pulmonary embolism and thrombophlebitis. Drs. R. V. Chapple and H. O. Singher reported that 91 per cent of 171 cases showed "good to excellent response."

Merck Sharp & Dohme have combined Hydrodiruil with reserpine (Hydropres) for the control of hypertension.

The attenuated live virus oral poliomyelitis vaccine (Orimune) may be available next year. Lederle has not applied for government license possibly because of the announcement by U. S. Surgeon General Burney that approval of the new product appears to be far in the future. It has been rumored that this policy stems from the fear that publicity about an oral vaccine may interfere with the current vaccination program. At present, Lederle has enough vaccine to immunize 2 million people.

More than 700,000 persons have participated in field trials of this oral polio vaccine in the past nine years. Clinical trials have been conducted here, in Europe, Asia, and in many Central and South American countries. All the children in the most susceptible age group in Costa Rica (448,000), for example, were given the vaccine in March of 1959.

Lederle reports that the product is safe to use in humans and it confers a high degree of active immunity against all three types of polio.

Warner-Lambert set out to find an ideal soft drink and came up with Fizzies. They wanted a product that was low in calories, tasty, and sugar free. Fizzies are tablets about the size of a nickel that effervesce instantly when dropped into a glass of cold water. They are particularly suitable, according to the producer, for diabetic youngsters.

Dr. William P. Mulvaney, University of Cincinnati urologist, who has been working on urinary solvents for years, announced that Renacidin is effective in treating urinary calculi composed of calcium phosphate, magnesium phosphate, and carbonates. This product is composed of lactones and acid salts, and the stones are irrigated by a continuous slow drip method. The aim is to soften the calculus or reduce it to the point where it can be eliminated or removed easily by instrument.

HEALTHFUL HAWAII

It did not take long for statisticians of the Metropolitan Life Insurance Company to report that Hawaii, our newest state, can boast an excellent health record. Advances in medical practice, improvement in environmental sanitation,

and a general rise in living standards are given much credit for the good record of the islands. Control over infectious diseases has increased, and striking progress has been made in protecting infant life and making childbearing safer. The average length of life is two and a quarter years longer than for mainland males. This is a good excuse to move to the land of the swaying palms and hula dancers.

CHEAPER MINOR SURGERY

A hint for reducing the cost of medical care: install an efficiently designed minor surgery room.

PUBLIC HEALTH

The Public Health Service reports that during March both the monthly levels and the longer term averages for all radioisotopes in milk samples remained below permissible levels as established by the National Committee on Radiation Protection and Measurements.

The Public Health Service has mapped out many areas that have natural fluoridation. More than 450,000 people in 136 Illinois towns, for example, drink water with enough natural fluoride to prevent two out of three dental cavities.

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Childrens' food preferences

The tendency to express feelings in the stronger terms of "like" or "dislike" may be attributed partly to the relative immaturity of the children. Even at these ages, however, some children expressed indifference to some foods. In fact, two children expressed indifference to 11 of the 25 items . . . Food items in order of popularity, as checked by the children, indicates the predominance of positive feelings toward food. Only one item, fat meat, was liked by less than half the children, while three-fourths liked 17 of the 25 items. All but one child liked meat, meat prepared alone, and ice cream. Fat meat was the

least popular item, and fish the second least popular. Potatoes, bread, crackers, milk, raw fruits, and cereals scored high. Raw vegetables were more popular than cooked. Raw fruits, fruit juices, and canned or cooked fruit were liked in that order. Meat prepared alone was preferred to meat prepared with other foods, as in stew. Cake was slightly more popular than pastry. Candy and sweets, though popular, were not among the top favorites. Possibly the responses to these items reflect the adult attitude that these foods are not good for children. *Marian E. Breckenridge. Food Attitudes of Five-to-Twelve-Year-Old Children. J. Am. Dietet. A. July 1959.*

The 1959 Annual Meeting

With a physician registration of 33 (total registration 2,976) the annual meeting at Hotel Sheraton in Chicago, in May, was a successful one. It differed from preceding meetings in that the first session of the House of Delegates was held on Monday night, prior to the actual opening.



When Raleigh C. Oldfield, retiring president, (left) handed the official gavel over to our new president, Joseph T. O'Neill, Harold M. Camp was called to the platform in recognition of his having completed 35 years as secretary for the Society. Dr. O'Neill is wearing the new President's Medallion, an origination of Mrs. Oldfield. He in turn will present it to his successor. The center, a caduceus, is removable, to be made into a key, to be worn by past presidents.

Three new members of the Council were named during the meeting. Ralph N. Redmond of Sterling succeeds George E. Kirby in the Second District. William E. Adams, Chicago, will serve the Third District, replacing H. Close Hesseltine, who became president-elect. Bernard Klein, Joliet, will serve the Eleventh District, replacing Edwin S. Hamilton, who retired after many years of distinguished service.

A large and festive group attended the annual President's Dinner. The immediate past president, Lester S. Reavley of Sterling, was toastmaster, and the speaker was the widely syndicated columnist, Miss Anne Landers.

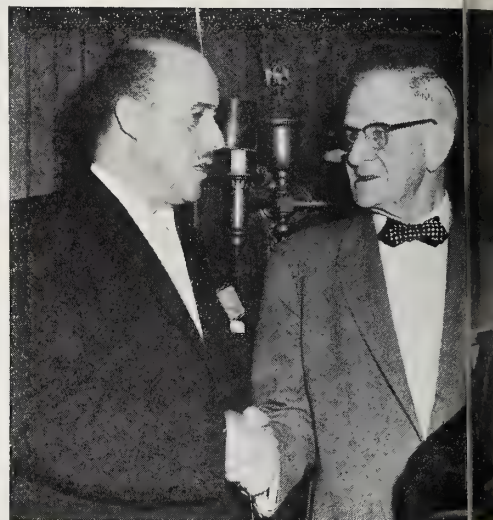




Public Relations Dinner

A skit called "RX for a Common Code" brought entertainment and education to the largest crowd ever to attend a public relations dinner. Attorney John J. Riordan directed the skit, which humorously depicted the troubles of a medical group "Cuttem, Slicemm & Shotz", and their legal opposites — "Whoop, Holler & Yelle". The cast was made up of lawyers and their office aids.

Attorney John J. Riordan (left) receives congratulations from Dr. Percy E. Hopkins, the Society's chairman of the Committee on Public Relations, on the spirited performance of the group.



The Fifty Year Club



The Fifty Year Club is always enthusiastically attended. Above, clockwise, are Dr. W. L. Gregg, Chicago, Drs. Oscar B. N. and L. O. Sale, Fisher, Miss Alice W. Decatur, and Dr. Clare A. Garber, Decatur. At left Andy Hall and Theodore R. Dellen (right) witnessed the presentation of the outstanding general practitioner certificate to Mark Greer, Vandalia, by Dr. Van Dellen. Dr. Van Dellen was the principal speaker at the luncheon.



The Woman's Auxiliary

The Woman's Auxiliary held their annual meeting simultaneously, under the direction of Mrs. Richard E. Westland, as convention chairman. In the picture at the left Mrs. Fred C. Endres (right) the retiring president of Peoria Heights, presenting the Auxiliary gavel to her successor, Mrs. John Van Prohaska of Chicago.

Pictured above are the new auxiliary officers —

Mrs. B. E. Montgomery, Harrisburg — Recording Secretary

Mrs. Edward G. Warnick, Chicago — First Vice President

Mrs. J. S. Lundholm, Rockford — Second Vice President

Mrs. John VanProhaska, Chicago — President

Mrs. Richard E. Westland, Chicago — Corresponding Secretary

Mrs. Charles L. Wunsel, Aurora — President-Elect

Mrs. Newton DuPuy, Quincy — Treasurer

Mrs. John Koenig, Blue Island — Third Vice President



Scientific Exhibits



Winner of the gold medal for original work was the exhibit "Cervical Epithelial Dysplasia — Experimentally Produced" by Harold A. Kaminetzky, Elizabeth A. McGrew, Richard Phillips, Otto Saphir and Michael Leventhal of the University of Illinois and Michael Reese Hospital.



Winner of the gold medal for educational value was "Roentgen and Hematological Manifestations of the Congenital Hemolytic Anemias". There were 25 scientific exhibits by John J. Litschgi of the Cook County Hospital, Hektoen Institute for Medical Research.



Exhibitors generally were pleased with attendance and interest shown. In the picture at the left — Mr. John Adams and Mr. Jim Monilaw of the Upjohn Company are showing their products to Drs. Lee N. Hamm, Lincoln, Ed. Adomaitis, Chicago and U. T. Hodges, Kankakee. At right is a general view of one of the aisles. Keen eyed readers may spot Dr. Harry M. Hedge, Evanston, a past president of the Society.

Technical Exhibits

Negative aspects of physicals

One of the paradoxes of modern medicine is the widespread advocacy of periodic health examinations and the limited extent to which they are practiced. Although Mock introduced health examinations for industrial employees in 1909 and the American Medical Association, as early as 1925, published a manual of procedures for such examinations, they remain unaccepted by a majority of physicians and the great mass of the public.

The reasons for the lack of more general acceptance of health examinations lie in misunderstandings of their potential benefits, the applicable methods, and the costs involved. In too many instances, those who have advocated them have overstated the benefits which may be derived. On too many occasions, health propagandists have excited the interests and expectations of the public with resultant embarrassment of physicians who did not honestly feel that they could achieve the results expected. A striking example of this is the frustration and annoyance felt by the physician who is approached by a person who wants reassurance that he does not have cancer. The physician, knowing too well how difficult it

is to detect many internal cancers while they are in an operable stage, is anxious lest a statement that he can find no cancer will be interpreted as a guarantee that none exists. At the same time, he knows that anything less than hearty reassurance may provide anxiety. The physician is likely to be particularly annoyed if the patient expects him to give this reassurance without benefit of X-ray and laboratory examinations.

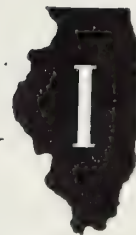
A more widespread cause of disenchantment for the physician is the experience of performing examinations in military or industrial settings where he observes that, with the methods commonly in use, the proportion of remediable defects he discovers is discouragingly small for the amount of time spent. *Rodney R. Beard, M.D. Periodic Medical Examinations. California Med. June 1959.*

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Tranquility is transitory

Since that awesome moment when man realized the satisfactions of the day were so temporary he would have to repeat the entire procedure the following morning, he has been attempting to regain the tranquility this foresight destroyed. *Malcolm E. Phelps, M.D. Why and Which Tranquilizer? J. Louisiana M.S. May 1959.*

NEWS of the STATE



ADAMS

PICNIC. Members of the Adams County Medical Society enjoyed the Professional Men's Picnic in June at "Ole Doc Bitter's Hideaway."

COOK

NEW MEDICAL UNIT. Two grants totaling \$100,000 have been voted by the Jerome D. Solomon Memorial Research Foundation, according to President Seymour B. Orner, Highland Park. The Dr. Jerome D. Solomon Memorial Institute for Graduate Studies in Medicine and Surgery will be established with a \$75,000 grant to provide lectureships at the Cook County Graduate School of Medicine. The remaining \$25,000 will be used to equip a research laboratory in La Rabida Sanitarium.

NEW PATIENT CARE. The first complete program in Chicago of "progressive patient care" has been started at Grant Hospital. The system encompasses three distinct units — intensive care, intermediate care, and self-care. With the separation of patients into the type of care needed, the medical staff can provide quicker and more efficient service. (See editorial, July IMJ).

HOSPITALS. The new Maribel and Harry Blum pavilion of Weiss Hospital will house its Jacob M. Arvey Clinic. This will permit expansion of clinic services to give more free or minimum cost medical-surgical care to persons who are unable to afford private care.

Work on the proposed \$6 million Holy Family Hospital construction is underway. It is located two miles north of Des Plaines and will hold 216 beds.

MEETING. Dr. Max Sadove, professor and head of the department of anesthesia, University of Illinois College of Medicine, gave a report of a Medico-International Co-operation Association tour to Vietnam to demonstrate and teach modern anesthesia at Passavant Memorial Hospital in June before the Chicago Society of Anesthesiologists.

NEW POST. Dr. Lester R. Dragstedt, former chairman of the department of surgery at the University of Chicago, has joined the faculty of the University of Florida College of Medicine. Twice Dr. Dragstedt was the recipient of the Gold Medal Award of ISMS; in 1947 for his work on gastric vagotomy for peptic ulcer, and in 1950 for his quantitative studies on the mechanisms of gastric secretion.

Dr. John C. Troxel has been appointed medical director of Hospital Service Corporation and Illinois Medical Service, of the Chicago Blue Cross and Blue Shield Plans. In his new post, he will be responsible for the internal operation of the medical division and maintain liaison with the medical profession. From 1946 to 1957, Dr. Troxel served as medical director of the Chicago plant of Swift and Company, and since 1957, as medical director of the entire company.

RETIREMENT AND NEW POST. Dr. Percival Bailey, of the neurology staff of the University of Illinois College of Medicine and Research and Educational Hospitals, will retire from the University, Sept. 1. Dr. Bailey will become full time director of research at the new Illinois State Psychiatric Institute, Chicago.

MACON

MEETINGS. The Macon County Medical Society has had no scientific meetings during June, July, and August, but they will be resumed on September 22.

PIKE-CALHOUN

MEETING. The Pike-Calhoun County Medical Society held its June meeting at Pleasant Hill.

SANGAMON

MEETINGS. Guest speaker at the annual meeting of the Springfield Medical Club was Dr. Chester Southam, Sloan Kettering Institute for Cancer Research. "Recent Studies on Cancer Etiology," was Dr. Southam's topic.

The annual picnic for the Sangamon County Medical Society was held at Dr. Furrie's, Lake Springfield.

GENERAL

RETIRED. Major General Olin F. McIlnay, deputy surgeon general of the United States Air Force, retired July 31 after more than 30 years of active military service. General McIlnay is a native of Polo (see IMJ Feb.).

NEW CAMPUS. Governor Stratton and Dr. Walter Theobald turned over the deed to approximately ten acres of land in the heart of the Medical Center District on Chicago's west side to Dr. John J. Sheinin, president of the Chicago Medical School. The new campus will be bounded by Harrison, Polk, Damen, Ogden, and Hoyne. The first buildings being planned include a medical research institute, a new medical school building, and student and faculty dormitories. The school currently enrolls about 72 students each year but an enrollment of 100 is anticipated. A graduate school is planned for students working for advanced degrees.

FELLOWSHIPS. The following physicians from Illinois received their certificates of Fellowship in the American College of Chest Physicians this June:

H. Neale Barnes, Springfield; David R.

Barnum, Evanston; M. J. Barrash, Chicago; Joseph A. Cohen, Evanston; Noble O. Correll, La Grange; James Graham, Springfield; John H. Houseworth, Urbana; John P. Igini, Elmwood Park; Milton M. Kadin, Chicago; Morris A. Kaplan, Chicago; William B. Knapp, Evergreen Park; Joseph A. Mezyk, Chicago; William R. O'Connor, Chicago; Camen R. Paynter, Rockford; B. Poskus, Kankakee; George A. Saxton, Jr., Chicago; Albert L. Sheetz, Harvey; Stanford K. Sweany, Chicago; and Louis A. Szivos, Downey.

The American Board of Obstetrics and Gynecology for 1959 certified 19 physicians from Illinois, as follows:

Drs. Donald R. Dye, Nicholas W. Fugo, Mario A. Irigoyen, Harold A. Kaminetzky, Myrna F. Loth, and James H. McClure, Chicago; Leon G. Atherton, Peoria; George E. Fagan, Champaign; Joseph E. Field, Joliet; Robert R. Harriage, Aurora; Lawrence W. Hayes Jr., Belleville; John E. Justema Jr., Hinsdale; Anthony N. Kenwick, Homewood; John W. Roddick Jr., Evanston; Alan B. Sampson and Jack A. Sampson, Oak Park; Richard D. Schreiber, Berwyn; John Standard, Springfield; and Robert G. Stone, Elgin.

ILLINOIS STATE FAIR. An exposé of mechanical quack devices sold and used by the charlatan for health purposes was one of the feature attractions arranged by the Illinois State Medical Society at the Illinois State Fair in Springfield, August 14-23. The display included everything from a magic horse collar, claimed to magnetize the iron in the blood, to a radioactive rejuvenator and many other weird and humorous fake gadgets. In addition, an extensive file containing descriptions and information concerning many more mechanical gadgets used by these fakers was available for public inspection.

In more or less the same category of unorthodox procedures was nutritional nonsense. This large exhibit tended to dispel some of the current beliefs concerning nutritional needs and requirements now so conspicuously publicized.

The ISMS's spacious two booth exhibit, located in the north end of the grandstand at the fair grounds has been an annual spot of interest for over 10 years. Each year, in addition to displaying exhibits of current health interest, medical educational films are shown in a minia-

ture theater. Various pamphlets citing medicine's progress and booklets for personal health records are distributed to visitors.

POSTGRADUATE EDUCATION MEETING. A group of four physicians from the Stritch School of Medicine of Loyola University, Chicago, headed by Dr. George F. O'Brien, chairman of the department of medicine, will present a postgraduate conference at Champaign, September 10.

The meeting has been arranged by the Postgraduate Medical Education and Scientific Service Committee of the Illinois State Medical Society for the eighth councilor district. It will be held at the Champaign County Country Club, with the Champaign County Medical Society as the host. It will be opened with a luncheon, followed by the scientific program. Dr. Joseph T. O'Neill, Ottawa, president of the ISMS, will be one of the dinner speakers.

DEATHS

LESLIE W. BEEBE*, Oak Park, who graduated at Chicago Homeopathic Medical College in 1897 died recently, aged 86. He had practiced medicine in Oak Park for 59 years.

MORRIS BRAUDE*, Chicago, who graduated at Rush Medical College in 1905, died June 18, aged 77. He was attending psychiatrist at the Cook County Psychopathic Hospital until his semi-retirement two years ago.

THOMAS O. CANTWELL*, Harvey, who graduated at Rush Medical College in 1935, died July 9, aged 60. He had practiced medicine in the Harvey and Tinley Park area for 22 years.

NICHOLAS ALFRED DIGGS*, Chicago, who graduated at Meharry Medical College, Nashville, in 1916, died June 25, aged 73. He was honorary senior surgeon at Provident Hospital, and an examining physician for the Illinois State Athletic Commission.

MURIEL V. HAYWARD, Coral Gables, Fla., formerly of Winnetka, who graduated at Columbia University College of Physicians and Surgeons, New York, in 1926, died June 10, aged 75. She was awarded the French *croix de guerre* for her services in World War I.

HARRY HEISS*, Chicago, who graduated at the Chicago Medical School in 1920, died recently, aged 67.

JAMES KOSSE*, Chicago, who graduated at Albertus—Universitat Medizinische Fakultat, Konigsberg, Prussia, in 1937, died April 10, aged 47. He was associated with the Veterans Administration for many years.

LOUIS EUGENE HARTRICK, Champaign, who graduated at Northwestern University Medical School in 1910, died March 19, aged 81. He was also a graduate in pharmacy.

MYRVEN A. LANE*, Orland Park, who graduated at Northwestern University Medical School in 1941, died June 25, aged 64. He was a member of the staff of the Englewood Hospital.

HARRY OLIVER MARYAN*, Chicago, who graduated at the University of Illinois College of Medicine in 1924, died March 28, aged 63. He was a member of the Central Association of Obstetricians and Gynecologists, and a fellow of the International College of Surgeons.

HARRY E. MOCK*, retired, Ormond Beach, Fla., formerly of Chicago before his retirement in 1955, who graduated at Rush Medical College in 1906, died June 30, aged 78. Widely known as an authority on treatment of skull fractures and brain injuries and on industrial medicine and surgery, he was the author of several articles in those fields. He was consultant for a number of railroads, and had served as associate professor of surgery at Northwestern University Medical School. He had been associated with St. Luke's-Presbyterian Hospital since 1915, where, at the time of his retirement, he was given the title of surgeon emeritus.

HENRY ISAAC OWEN, Canton, who graduated at Barnes Medical College, St. Louis, in 1901, died in Peoria March 22, aged 83.

JOHN R. ROMANO, Elmwood Park, who graduated at Loyola University School of Medicine in 1919, died June 12, aged 70. He had been affiliated with the Veterans Administration for many years.

CHARLES R. ROTH*, retired, Chicago, who graduated at Northwestern University Medical School in 1906, died June 8, aged 82. He had practiced medicine on Chicago's north side for 50 years.

HENRY JOHN SCHMID*, Harvard, who graduated at Bennett Medical College, Chicago, in 1909, died June 8, aged 83. He had served as

*Indicates members of the Illinois State Medical Society.

chairman of the Harvard Board of Health for 20 years.

CHARLES J. SOMERS*, Lansing, who graduated at the Chicago Medical School in 1936, died June 24, aged 66. He was a member of the staff of St. James Hospital, Chicago Heights.

FRANK C. STERNES*, Cicero, who graduated at Loyola University School of Medicine in 1933,

died June 26 in an airplane crash in Milan, Italy. He and his wife, who also was killed, were ending a five week vacation in Spain, Portugal, Africa, and Italy. He was a member of the staff of the MacNeal Memorial Hospital, Berwyn, and St. Anthony's Hospital. He was 51.

*Indicates member of the Illinois State Medical Society.

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Listen to your patients

Psychobiologic therapy is a collaboration between physician and patient, each learning from the other. It can never be patterned after a preconceived plan, but must always be modified and adapted to a specific patient's needs in a particular life situation. The patient usually comes to the doctor convinced that his abdominal distress or cardiac dysfunction is due to only one possible cause—a disturbance of organic functioning, totally unrelated to his way of life. These basic needs are:

1. The need to talk. Next to bodily activity, talking is the best method of alleviating tension. It gives the patient the opportunity to discharge pent-up feelings and provides him with a sympathetic listener, the physician, upon whom he depends for understanding and guidance. Treatment, therefore, begins by the physician's listening to what has gone wrong. It literally is a form of auscultation, and like auscultation of the heart sounds, one must pay particular attention to everything that is heard. It is impossible to present a list of fixed rules that can be used in this phase of psychotherapy. The following general principles will be of assistance:

- a. Listen patiently to what the patient is saying. It gives him a feeling that you are genuinely interested in him as a person.

- b. Do not interrupt when he seems to talk of inconsequential trifles. There is no such thing as irrelevance in a patient-physician interview. The patient is expressing his feelings as well as talking about facts.

- c. Think along with the patient. Ask yourself not only what is he saying but how he is saying it, and why does he say what he does at this particular moment? Does he need sympathy? Is he misinformed? Does he feel guilty, and therefore is seeking reassurance? Is he angry, afraid, sad, or evasive as he approaches a sensitive personal topic?

- d. Show a real interest and personal warmth in what is going on. Ask for more details, examples, or amplifications of what already has been stated in outline fashion. Ask, "Then what happened?" "So?" "And then," or more pointedly, "Why?"

- e. Avoid criticism and argumentation. The patient can accept only a part of what you feel or know to be the whole truth. He has been deceiving himself over a long period of time and is not able to see himself as objectively as others may see him. Therefore, never tell him he is "neurotic" or that "nothing is wrong" or that he is "seeking sympathy." *Jacob H. Conn, M.D. Psychobiologic Therapy. Maryland M.J. May 1959.*

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The Significance of Pleural Effusion

STANFORD K. SWEANY, M.D., CHICAGO

Pleural effusion usually indicates an underlying disease process and may be a forewarning of the existence of a disorder carrying a serious prognosis. It never should be regarded lightly, and every attempt ought to be made to establish the causative etiology. The lack of persistence of symptoms and the frequently rapid clearing of fluid might lead the attending physician to attach minimal significance to the problem.

The presence of pleural effusion accompanying an illness should be suspected when there is chest pain with respiratory movement. This situation demands a chest X-ray, with a second X-ray in two weeks, since early changes may not be detected with the first. The findings on physical examination readily support a suspicion of effusion. Dullness to percussion, decreased breath sounds, and vocal fremitus are present over the involved side.

Fluid formation in the pleural cavity results from alterations in the pleural fluid dynamics or

from disease involvement of areas adjacent to the pleural space. Increased pressure within the pulmonary blood or lymphatic vessels will increase transudation of fluid. The osmotic retaining forces may allow a similar movement of fluid where blood protein has been decreased. These fluids usually have a low specific gravity and cell count.

The tissue response to disease invading the pleural space, or areas adjacent to it, results in vascular changes with fluid and cellular outpouring. The fluid usually is dense and cellular.

The evaluation of pleural effusion is aided by clinical history, symptomatology, and laboratory tests. Certain minimal requirements are necessary for proper evaluation. The history should relate whether the mode of onset was insidious or abrupt, and whether there had been previous episodes of pleuritic pain or pneumonia. The presence or absence of chills, fever, dyspnea, cough, or hemoptysis is pertinent. The reaction to the tuberculin and fungal skin tests should be determined. This should include the most concentrated strength of tuberculin, if the weaker strengths are negative. White blood count, differential count, sedimentation rate, and routine urine may point up valuable clues leading to diagnosis.

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The opinions and conclusions published by the author are the result of his own work and do not necessarily reflect the policies of the VA.

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A sample of the pleural fluid should be aspirated and transferred to a sterile bottle containing 0.5 cc. of heparin. A total and differential cell count, cytological evaluation, and cultural studies for tuberculous, fungi, and routine bacteria should be made on the centrifuged sediment of the fluid. Protein content or specific gravity can be determined on the supernatant portion. Only two findings are diagnostic: A positive cytology for malignant cells, and a positive bacteriological culture.¹

A needle biopsy of the parietal pleura, which may be performed as simply as a thoracentesis, will offer further valuable aid in diagnosis from the tissue specimens that are obtained.^{2,3,4} When this procedure is not revealing, open surgical biopsy should be resorted to.^{5,6} The biopsy technique, utilizing a Vim-Silverman needle, has been helpful in identifying granulomas in a good percentage of our cases.

The two most important conditions producing pleural effusions are tuberculosis and carcinoma. Since tuberculosis is treatable and entirely curable with the proper use of antituberculous chemotherapy, and since untreated tuberculous pleural effusion is known to exacerbate insidiously into open, active disease in over 50 per cent of the cases within a two year period,⁷ the importance of proper diagnosis is apparent.

An effusion appearing insidiously, especially in a young person, should be considered tuberculous until proved otherwise. On the other hand, it is not uncommon for an effusion appearing in a person 40 years or older to be tuberculous, even though the person's age might suggest malignancy. This is particularly true in the past 10 years, when we are seeing a higher percentage of older people being discovered for the first time with active tuberculosis. The onset may be abrupt but usually is insidious and often is accompanied by fatigue, weight loss, and low grade fever. The tuberculin skin test usually is strongly positive, but rarely may be negative during an anergic phase of the disease accompanied by acute clinical symptoms. It may be wise to repeat the skin test after two to four weeks, when the acute phase has subsided.

The tubercle bacillus does not remain free in the fluid for any great period of time, consequently the yield of positive bacteriological cultures in tuberculous effusions is less than 30 per cent.⁸ The Vim-Silverman needle usually will

yield a plug of pleural tissue, which will exhibit specific granuloma on histological section. Special stains of the tissue sections or culture of a portion of the biopsy material often will yield acid fast organisms. When needle biopsy is non-productive, open surgical biopsy will allow identification of specifically involved areas where selected material may be taken.

Malignant effusions are notable in their unrelenting tendency to produce ever increasing amounts of fluid, and generally by a downhill course. They occur more commonly in the older age group and usually are insidious in onset. The character of the fluid will vary, depending upon whether there is direct invasion of the pleural space with tumor or whether the fluid is the result of dynamic pressure changes from vascular occlusion by the tumor. With direct invasion, the fluid has a higher specific gravity, is frequently bloody, and often has malignant cells in the sediment. The positive needle biopsies in this group are less than 50 per cent because of the usual tendency for a scattered dissemination of tumor. Pleural invasion with carcinoma carries a hopeless prognosis, but can be ameliorated with the use of nitrogen mustard and radioactive heavy metal solutions.^{9,10}

Pleural effusion associated with acute pulmonary illness of abrupt onset suggests that the cause may be an acute bacterial or viral pneumonia. The history, physical findings, adequate bacterial culture studies of the sputum and fluid, white blood counts, fluid cell count, and differential may help confirm the diagnosis. Viral etiology may be suspected after elimination of other causes, but blood serum agglutinations for specific suspected viruses offers better direct evidence. A rising titer on serum taken during the attack and several weeks later during convalescence is confirmatory.

Fungous infections simulate tuberculous effusions. The clinical course and histology may be indistinguishable. Culture of biopsy material, pleural fluid, or sputum, in addition to skin tests and complement fixation, may be helpful in differentiation. The fungal skin tests frequently are negative in the presence of active disease.

Identification of effusion secondary to disease impairment of another organ system usually is apparent from the preceding history, physical, and course of the illness. This impression is supported by fluid findings, usually demonstrating

a clear fluid with a low cell count and low specific gravity. Aspiration of large effusions is therapeutically indicated, especially when secondary to cardiac decompensation where the cardiac and respiratory functions are further compromised by the mass of fluid.

Effusion resulting from pulmonary infarction can be misleading. Early in the course of involvement, there is a tendency for misdiagnosis of pneumonia because of the findings of fever, chest pain, cough, bloody sputum, X-ray lesion, and effusion. The fluid at this time is always bloody and may raise the suspicion of malignancy, since an older age group usually is involved. To further the confusion, hemorrhagic fluid stimulates production of mesothelial cells, which are easily and frequently mistaken for malignant cells in cytological evaluation.

Grossly bloody effusions also result from chest trauma. Diagnosis is important, especially in large effusions, because of contraction and restriction of the lung, resulting from subsequent fibrosis. Early diagnosis and surgical decortication are essential.

In the past three years, 106 biopsies of the parietal pleura have been taken from 88 patients. The following results have been obtained (Figure 1):

Ten cases were diagnosed as malignancies by needle biopsy. Ten additional cases were diagnosed subsequently as malignancies by other means on follow-up from six months to three years. This gives a diagnostic yield of 50 per cent positive diagnoses by needle biopsy alone.

Thirteen cases were identified as granulomatous pleuritis with giant cell formation and sometimes caseation and acid fast bacilli. Only one of these was not confirmed later by finding the organism, but did clear satisfactorily with antituberculous chemotherapy. Three additional

DIAGNOSIS DERIVED FROM NEEDLE BIOPSY OF THE PLEURA			
	Cases	Biopsies	% of Total
Carcinoma	10	(12)	11.4%
Granuloma	13	(16)	14.8%
Acute Infection	18	(26)	20.4%
Nonspecific	23	(26)	26.1%
Negative	24	(26)	27.3%
TOTAL	88	(106)	100%

Figure 1

DIAGNOSIS ESTABLISHED in 74%
OF NONSPECIFIC CASES BY FOLLOW-
UP AND FURTHER EVALUATION

4-Carcinoma	1-Actinomycosis
3-Tuberculosis	1-Cardiac
3-Rheumatoid Arth.	1-Renal
3-Lupus E.	6-No Definite Etiology
1-Hodgkin's	

Figure 2

cases were diagnosed subsequently by open surgical biopsy; one had nonspecific histology, but positive culture. This gives a diagnostic yield of 81 per cent positive diagnoses by needle biopsy alone.

Eighteen cases were classified as inflammatory or acute pleuritis, because of a history and findings suggesting complication of acute pneumonia.

Twenty-three cases demonstrated fibrous pleural thickening and were diagnosed as nonspecific pleuritis.

On twenty-four cases, either an inadequate pleural specimen was obtained or pleural thickening was not present.

The total yield of positive diagnosis by needle biopsy combining the malignant and tuberculous groups is 26.2 per cent.

The 23 cases of nonspecific pleuritis subsequently were established as having a definite cause, in 74 per cent (Figure 2).

Diagnosis was established subsequently in 83 per cent of the 24 cases with negative needle biopsy. (Figure 3) A large proportion were secondary to cardiac disease and malignancy, suggesting dynamic vascular obstructive change rather than direct pleural involvement in these instances.

The following three cases will illustrate the value of pleural biopsy in establishing diagnosis:

Case #1. E.H. U# 12462. A 60 year old white, male, cook admitted with a complaint of weight loss and fatigue for one year and left anterior chest pain for three weeks prior to admission. He was not acutely ill, but had a persistent temperature of 100 to 101° F. and physical findings consistent with a left pleural effusion substantiated by chest roentgenogram (Figure

DIAGNOSIS ESTABLISHED IN 83%
OF NEGATIVE CASES BY FOLLOW-
UP AND FURTHER EVALUATION

9-Cardiac	1-Cirrhotic
6-Carcinoma	1-Viral Pericarditis
2-Hodgkin's	4-No Definite Etiology
1-Pulmonary Infarct.	

Figure 3

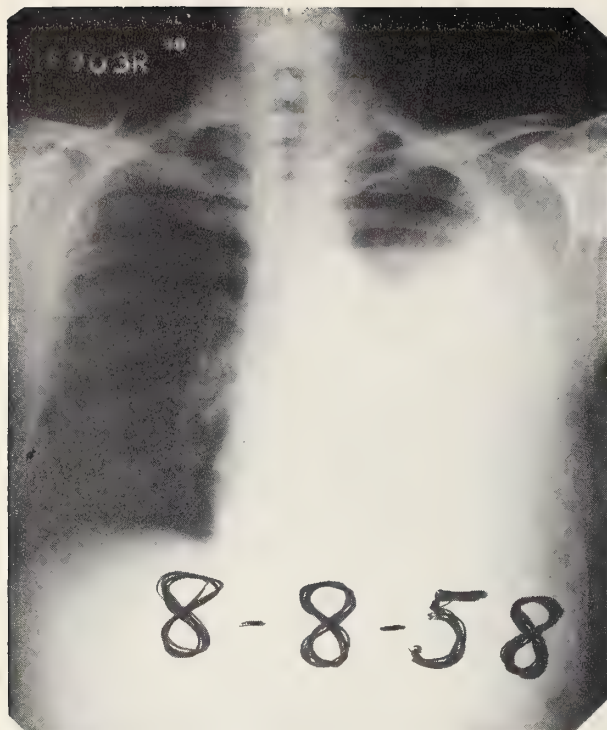


Figure 4, Case #1. Chest X-ray at admission.

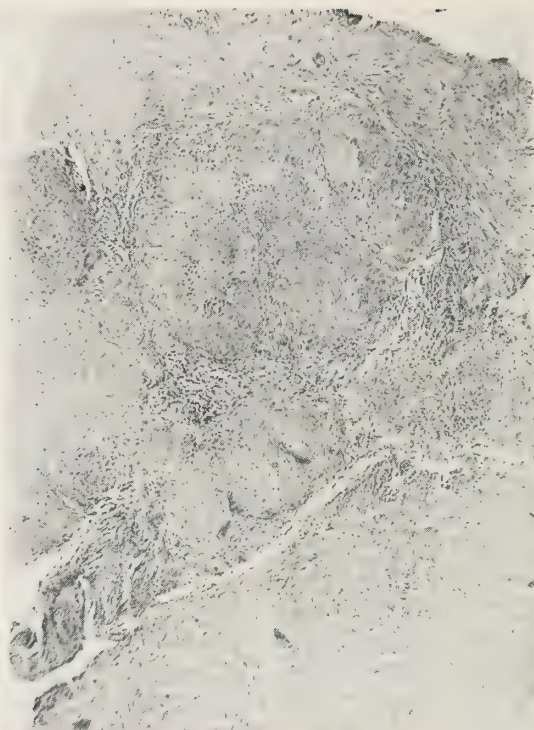


Figure 5, Histological section of tissue from needle biopsy of the pleura in Case #1 x 100 mag.

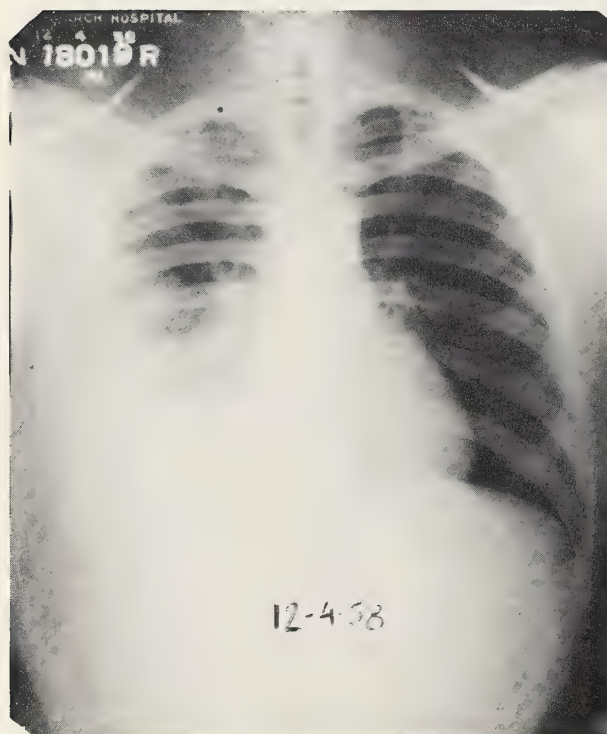


Figure 6, Case #2. Chest X-ray at admission.



Figure 7, Histological section of tissue from needle biopsy of the pleura in Case #2 x 100 mag.

4). The intermediate PPD and histoplasmin gave a 2+ reaction. Laboratory work was non-contributory, except for a sedimentation rate of 40 mm. hr. Three fluid aspirations produced 2,000, 800, and 1,000 cc. of clear fluid with protein content of 5.3 per cent. Biopsy of the pleura with a Vim-Silverman needle revealed a granuloma containing giant cells (Figure 5). Ziehl-Nielsen tissue stain demonstrated acid fast organisms. Organisms were not recovered from the fluid or gastric cultures. There was a good response with clearing of the fluid on antituberculous chemotherapy.

Case #2. L.B. U# 13330. A 27 year old colored professional football player who noticed right chest pain several weeks prior to admission. He was in apparent excellent health. Physical findings and chest roentgenogram suggested right pleural effusion (Figure 6). Repeated gastric cultures and two fluid aspirations were negative for acid-fast bacilli. Needle biopsy of the pleura revealed nonspecific fibrosis (Figure 7). An open surgical biopsy demonstrated marked thickening and caseation of the pleura, which demonstrated microscopically caseous granulation tissue consistent with tuberculosis (Figure 8). Culture of

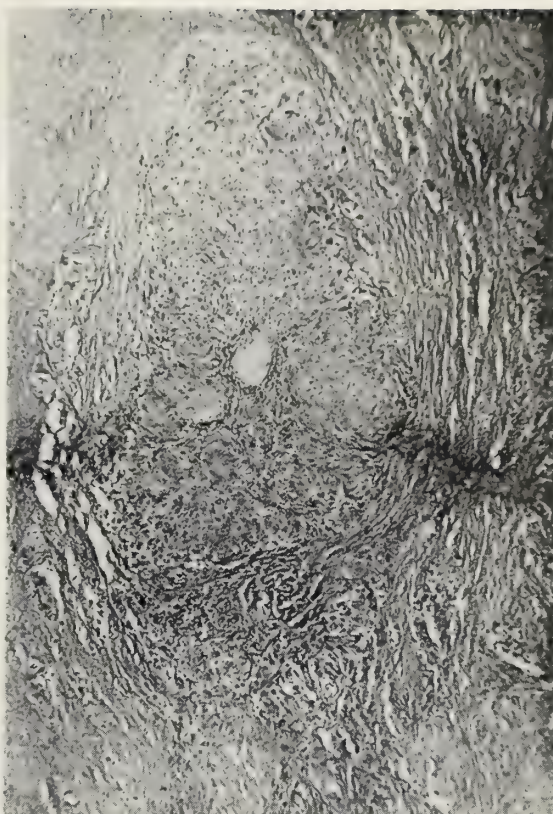


Figure 8, Histological section of tissue obtained by open surgical biopsy in Case #2 x 100 mag.

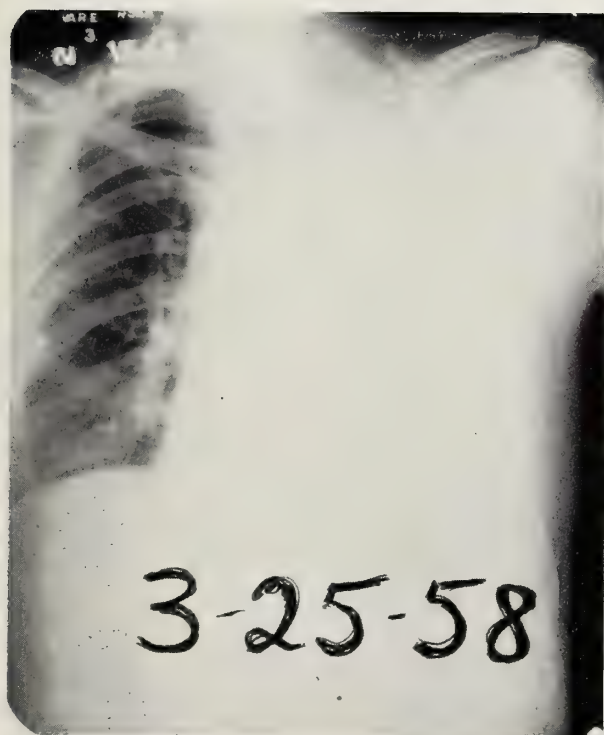


Figure 9, Case #3. Chest X-ray at admission

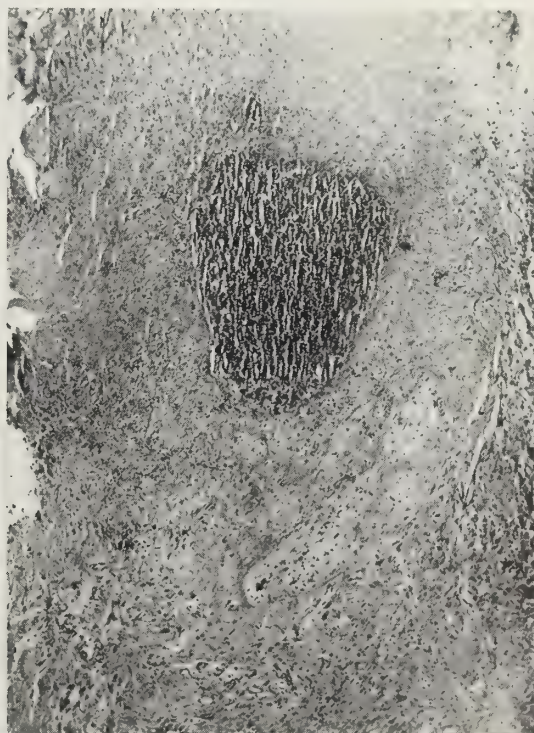


Figure 10, Histological section of tissue from needle biopsy of the pleura in Case #3 x 100 mag.

this tissue was positive for acid fast bacilli. The patient responded well to antituberculous chemotherapy. The fluid and thickening cleared slowly.

Case #3. G.K. U# 11361. A 38 year old cab dispatcher, who had had repeated hemoptyses for three weeks prior to admission. He had developed severe left chest pain, dyspnea, cough, malaise, and fever two weeks prior to admission, and had been given an antibiotic with some relief. He appeared acutely ill with a fever of 104° F. and chest pain. There was evidence of extensive left pleural effusion by X-ray and physical examination (Figure 9). Intermediate PPD reacted 3+. White blood count was 13.8 thousand with 85 per cent polymorphonuclear leukocytes. Sputum, gastrics, and pleural fluid were negative for pathogens. The fluid specific gravity was 1.024 with a protein content of 5.2%. Needle biopsy of the pleura revealed fibrosis with micro-abscess formation consistent with acute bacterial infection (Figure 10). After failure of absorption of the fluid, despite continued chemotherapy, resection of the left lower lobe with decortication was necessary. The resected specimen revealed bronchiectatic involvement. There was a good postoperative response.

SUMMARY

The frequent association of pleural effusion with a serious underlying disease process is emphasized. The necessity and means of attempting to establish etiology are stressed. This is espe-

cially so in tuberculous effusion, where proper treatment is curative, and nontreatment results in active open disease in more than 50 per cent of the cases within two years. The value of pleural biopsy by both needle and open surgical technique is cited. The results of 106 needle biopsies of the pleura in 88 cases are presented. Twenty-six per cent positive diagnoses were obtained in 88 cases. Specific diagnosis is obtained simply, with minimal trauma to the patient, and with saving of both time and money in shortened hospitalization and fewer diagnostic procedures.

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The Significance of Gall Bladder Deformities

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CHARLES F. MELCHOR, M.D., DECATUR

The radiographic indications for considering the operative removal of a gall bladder are well established and defined. This is the direct result of the advent of iodine preparations that are well tolerated when taken orally and at the same time, concentrate in the gall bladder to such a degree that its lumen becomes relatively opaque to roentgen rays.

Criteria for considering a gall bladder to be diseased include radiographic evidence of inability to concentrate the iodine preparation satisfactorily, demonstrable calculi, and evidence of certain deformities of the wall or lumen that are established as indicative of pathology. The great majority of diseased gall bladders fall into the first two categories and we are all quite cognizant of them. The less common deformities will be considered in this paper.

The first deformities to be considered are those that arise from the gall bladder wall but do not involve the patency of the lumen. These are demonstrated as radiolucent defects, in the opaque media, that can be shown to be contiguous with the gall bladder wall and are fixed in their relationship to it.

C.D.H. (Figure 1.) Shows a small, radiolucent defect on the medical aspect of the fundus of the gall bladder. This remained fixed in its position on the wall when radiographs were taken with the patient in various positions. Our differential included benign adenoma, a radiolucent stone that had become adherent to the wall, or early carcinoma. This patient elected not to have surgery and has done well on medical management, indicating that the diagnosis of carcinoma can be ruled out in this case.

C.E.B. (Figure 2.) Demonstrates the possible



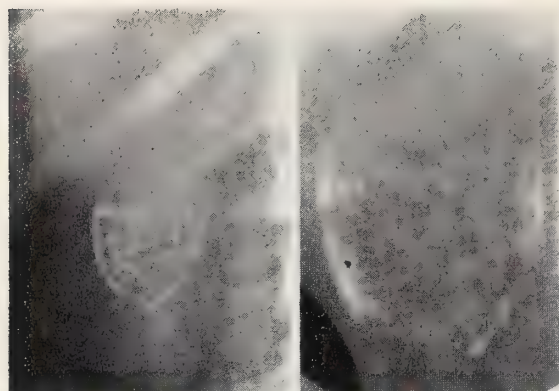
Figure 1

end result of the first case. This patient had carcinoma of the gall bladder with associated cholecystitis, cholesterolosis, and gall bladder wall calcification with partial perforation of the wall. The diagram was made with the assistance of the pathology department and illustrates the small radiolucent defect produced by carcinoma. Both the gall bladder lumen and the outer sac were filled with purulent material. This patient subsequently died from spread of her carcinoma.

R.C.C. (Figure 3.) Shows multiple small radiolucent filling defects arising from the gall bladder wall. This typifies the change seen in cholesterolosis and the defects are believed to represent stored masses of cholesterol underlying

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POLYPOID MASSES (Ca or GRANULATION TISSUE)

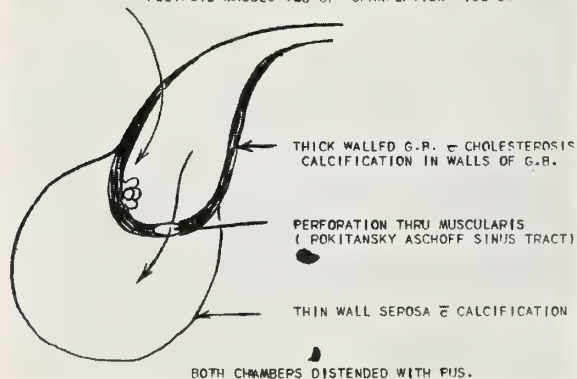


Figure 2



Figure 3

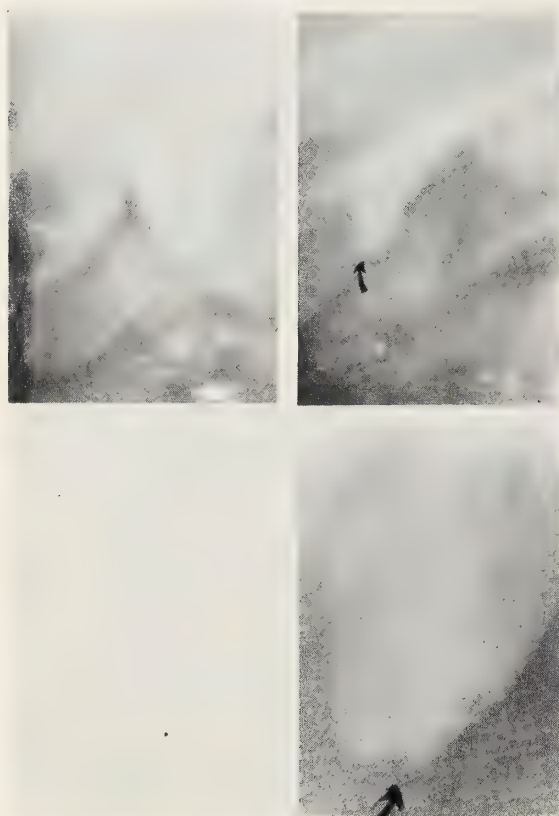


Figure 4



Figure 5

the mucosa. This usually is associated with a mild chronic inflammatory change involving the gall bladder wall. This patient did not have surgery.

P.H. (Figure 4.) Illustrates one of the deformities associated with cholecystitis glandularis or Rokitansky-Aschoff sinuses. These are diverticula, with an epithelial lining, that penetrate through the muscular layer of the gall bladder and expand in the subserous layer. They are similar to diverticula occurring in the colon and are felt by Pagan-Carlo and Genter¹ to signify severe, chronic gall bladder disease. LeQuesne and Ranger² describe three characteristic roentgen findings in cholecystitis glandularis. The first is a filling defect in the fundus of the gall bladder, as illustrated in this figure. This patient was operated on and the lesion consisted of multiple epithelial lined diverticula, or Rokitansky-Aschoff sinuses. Presumably the diverticula did not fill with the opaque media because the associated inflammatory changes obstructed the ostia.



Figure 6

M.F. (Figure 5.) This is an example of the roentgen findings seen in the second type of deformity described by LeQuesne and Ranger and demonstrates an irregular sawtooth gall bladder wall. This change is produced by contrast medias filling multiple diverticula that have invaded the gall bladder wall.

I.L.G. (Figure 6.) This serves to make the transition to the deformities of the gall bladder lumen and also demonstrates the third type of deformity associated with Rokitansky-Aschoff sinuses. The characteristic findings in this case are stenosis of the proximal gall bladder, with a halo of diverticula involving the wall in the area of constriction, and a serrated fundal border representing multiple media filled diverticula. The relationship of stenosis of the proximal gall bladder to the formation of Rokitansky-Aschoff sinuses has been discussed by Culver et al.³ who found that the area of stenosis was due to local hyperplasia of the gall bladder wall. He suggests that the sinuses distal to this may arise as a result of intracystic pressure from the stenosis, but also notes, as in our case, that diverticula, with their associated inflammatory changes, frequently are seen in the area of constriction. It

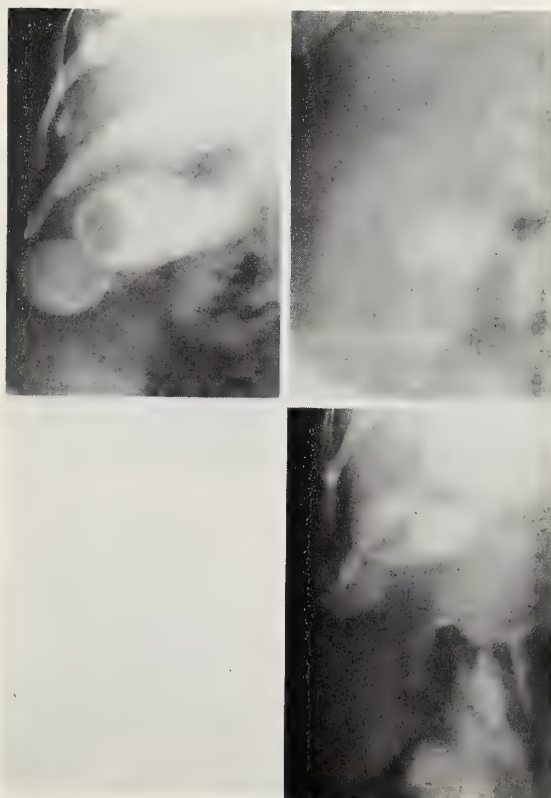


Figure 7

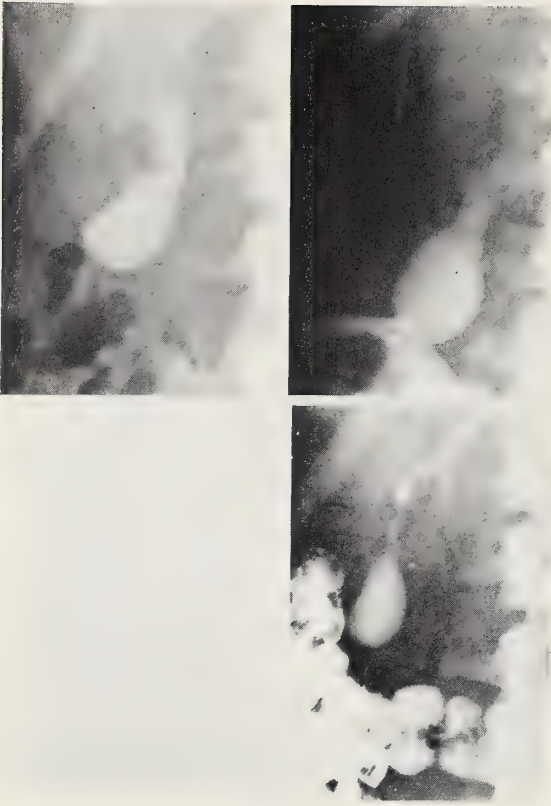


Figure 8

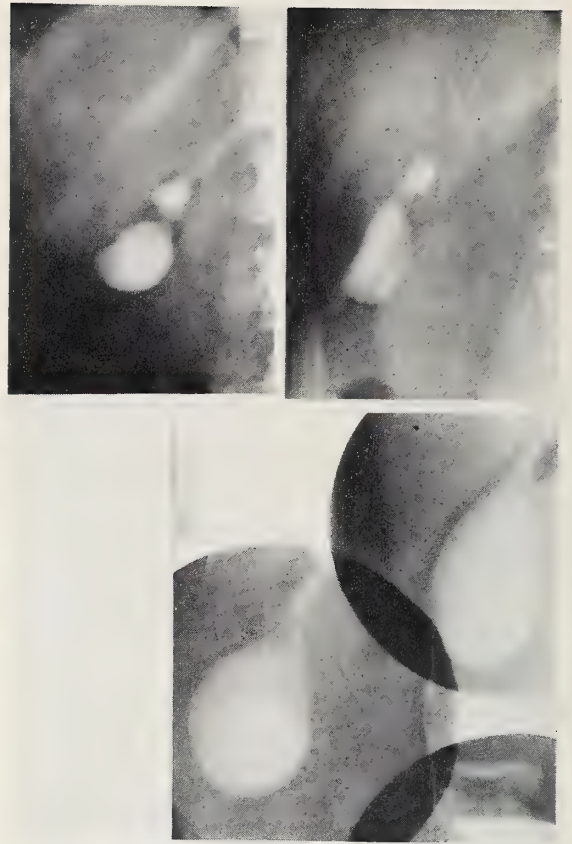


Figure 9

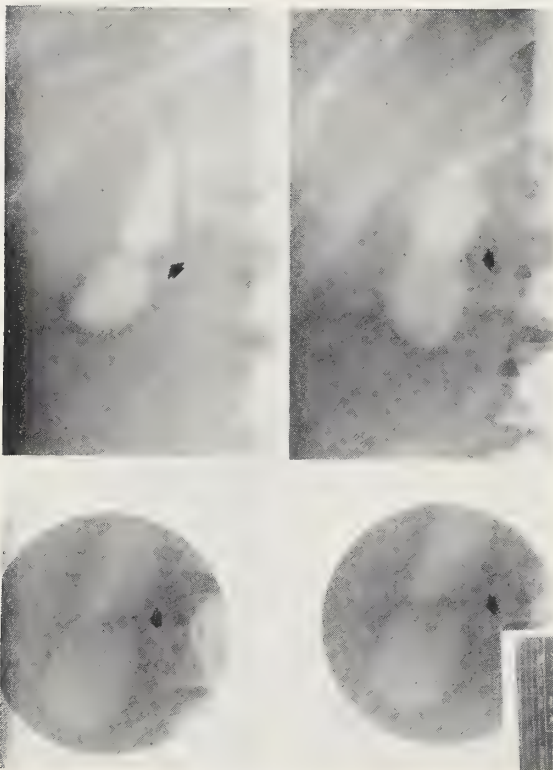


Figure 10

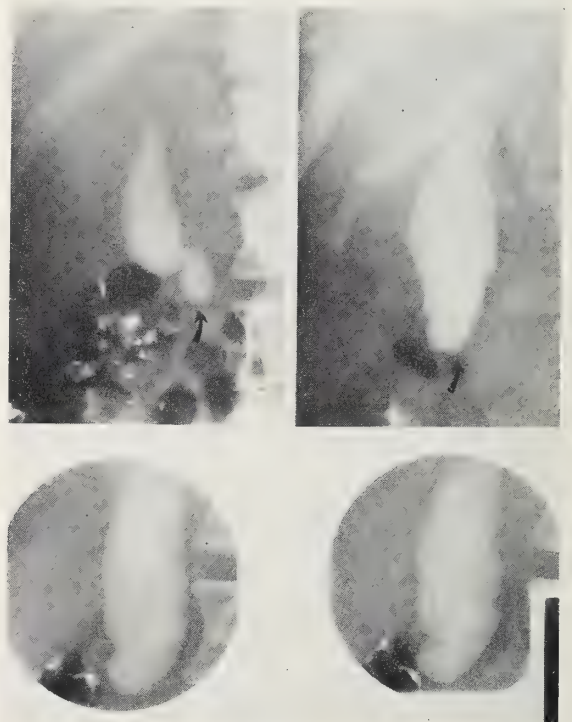


Figure 11

seems to us the possibility should be considered that the hyperplasia and the constriction have a common inflammatory etiology, particularly in view of the diverticula demonstrated in the previous two cases with no associated stenosis.

G.W.C. (Figure 7.) This case is illustrative of a severe deformity of the gall bladder lumen associated with stone formation. The pathology texts appear to be undecided as to whether or not cholecystitis precedes cholelithiasis. But a severe deformity such as this certainly enhances the inflammatory changes and, as demonstrated by Gordon⁴ the area of constriction actually may represent a division between a proximal normal segment of gall bladder and a distal segment showing inflammatory changes and stone formation.

The next two cases indicate that at least on occasion luminal deformities may be the result of preceding inflammatory changes in the wall of the gall bladder.

G.C.B. (Figure 8.) Shows a normal functioning gall bladder with deformity of the lumen, as seen in 1944. A second examination (Figure 9.) in 1957 demonstrates a marked increase in the degree of deformity, indicating a progressive inflammatory change in the gall bladder wall with associated stenosis of the lumen.

A.E.W. (Figure 10.) Had typical gall bladder symptomatology. Cholecystography demonstrated a deformed gall bladder with normal function. At surgery, multiple adhesions were demonstrated between the gall bladder and the duodenum, and a constrictive band was found across the middle of the gall bladder. Microscopic examination revealed cholesterolosis. These findings would indicate a previous acute inflammatory change, with residual adhesions and chronic inflammatory changes in the gall bladder.

G.V. (Figure 11.) Shows a gall bladder diverticulum that appears to be of the congenital type described by Eelkema and associates.⁵ These diverticula must be of significant size and have a narrow ostium. Microscopically, their walls are found to have all of the layers normally present in the gall bladder wall. This patient did not come to surgery although she had symptomatology consistent with gall bladder inflammation.

M.R.E. (Figure 12.) Demonstrates the commonly seen Phrygian cap deformity that resem-



Figure 12

bles a distal pseudo-diverticulum with a wide ostium. These usually are not considered clinically significant.

SUMMARY

I have tried to demonstrate and discuss a number of different gall bladder deformities with particular emphasis on severe deformities of the lumen which, in themselves, may be a manifestation of inflammatory change.

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Medicine's Approach to the Problems of Aging

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"In my opinion there is no more important issue before American medicine today than the problems of the aging and the aged," stated Dr. David B. Allman, before the AMA Planning Conference on Medical Society Action in the Field of Aging (Chicago, September 13-14, 1958). Dr. Gunnar Gunderson, retiring president of the AMA, recently declared, "A revolution in aging is taking place—our entire thinking on the subject of aging and the aged must be as dramatic and forward looking as the revolution itself. We dare not cling to the old perspective of aging in the face of longer life, better health, and increased productive potential on the part of our senior citizens. If we do, we will deny them and society the rewards for which medicine has fought in its wars against disease." Dr. Leonard Larson, Chairman of the AMA Board of Trustees, pledged this organization to a dedicated and continuing effort to improve the health care of the aged. Medicine has taken specific action at national and state levels to implement these statements.

The Illinois State Medical Society has demonstrated interest in the problems of aging and has furnished members serving in an advisory capacity to numerous organizations and committees. The Council of the ISMS created the Committee on Aging in July, 1958. This article is the first of a series on the problems of aging, sponsored by the Committee on Aging to be published in the Illinois Medical Journal.

In an effort to extend the work of the medical profession through co-operation with other national groups, the Joint Council to Improve Health Care of the Aged was organized by the American Dental Association, the American Hospital Association, the American Nursing Home

Association, and the American Medical Association. The objectives of the Joint Council are to correlate the efforts and resources of member organizations, as the principal purveyors of health care for the aged, and to establish liaison and a co-operative relationship with other organizations working with similar purposes in the field of aging. The First National Conference of the Joint Council was held in June, 1959. The Illinois Joint Council to Improve the Health Care of the Aged was created in May, 1959, by representatives of the Illinois State Dental Society, the Illinois Hospital Association, the Illinois Nursing Home Association, and the ISMS. The objectives of the Illinois Joint Council are to co-operate with the National Joint Council to co-ordinate the activities of the four parent organizations, and to study the health problems of the aged in Illinois.

The Committee on Aging of the AMA has developed a six point program as follows:

1.) STIMULATION OF A REALISTIC ATTITUDE TOWARD AGING BY ALL PEOPLE.

Tremendous contributions have been made toward the ever lengthening life span and we must assume responsibility for making these added years an interval of physical and mental well being, so far as possible. We must seek to improve both the public and medical attitude toward the aged. Society, families of the aged, labor, industry, and the aged themselves must be encouraged to develop a more hopeful concept and be made aware of the opportunities provided by and for the aged.

The old defeatist medical approach to the aged is changing but to facilitate this change physicians must become fully aware of the opportunities to keep the oldster well and to rehabilitate many of those who have become ill.

Chairman, Committee on Aging, Illinois State Medical Society.

A special effort must be made to indoctrinate student nurses, graduate registered nurses, and licensed practical nurses in the care of older patients. The physician must provide leadership and co-operation in an effort to solve the problems of aging at every level and maintain the older individual as a healthy participant in the family, civic, economic, and political life of the community.

2.) EXTENSION OF EFFECTIVE METHODS OF FINANCING HEALTH CARE FOR THE AGED.

Adequate methods for financing health care for those 65 and over must be made available. The AMA has reaffirmed its belief that voluntary health insurance and prepayment plans can and should provide the basis for meeting large health care costs for most people, including those 65 or older. Current experiments by private insurance carriers and several Blue Cross and Blue Shield plans indicate that solutions can be found to the special insurance problems of the aged. The Blue Cross and Blue Shield plans in Illinois have been requested by the House of Delegates of the ISMS to make coverage available under individual subscription to new subscribers aged 65 or over. Several private insurance carriers are now making such policies available.

The AMA House of Delegates in December, 1958, adopted the following proposal: "That the AMA, the constituent and component societies, as well as physicians everywhere, expedite the development of an effective voluntary health insurance or prepayment program for the group over 65 with modest resources or low family income; that physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such insurance and prepayment plans at a reduced premium rate." The House of Delegates of the ISMS passed the following resolution at the 1959 annual meeting:

"1. That the House of Delegates urge all persons, including those over 65 and who are financially able, to provide themselves with voluntary hospital and prepayment medical insurance to cushion the financial costs of good medical care. Such policies are available now. Recommend that Blue Shield and Blue Cross Plans in Illinois should attempt to prepare indemnity plans for these persons of 65 and over.

2. That the House of Delegates reaffirm its abiding interest in all persons needing medical care, including those over 65, and whether financially able or not.

3. That the physicians of Illinois be polled whether they would be willing to participate in a special plan, which the Illinois Blue Shield plans can be directed to prepare, to provide low cost insurance for persons over 65 years of age with modest incomes (not over \$3,000 per year per couple, or \$2,000 for an individual and with net worth under \$20,000). Eligibility for such low cost insurance would be determined by Blue Shield. Payments to doctors would be accepted as full payment. Participation in this special plan would be agreed upon by the doctor for one year, with general evaluation of the plan immediately thereafter by the Council of the ISMS.

At the same time, we urge that hospitals and ancillary services be asked to consider accepting payments scaled down proportionately by the insurance carrier.

4. That to the extent outlined above, the ISMS House of Delegates approve in principle the AMA proposal regarding medical care of those over 65 with modest income."

Efforts are being made to extend insurance coverage to care in approved nursing homes and in some states, limited home care also is being provided. These innovations should decrease the burden on overcrowded general hospitals, lessen the demand for expensive new hospital facilities, and decrease the cost of the medical care of the aged.

Governmental agencies must be urged to pay the full cost for medical care rendered to public assistance recipients both in hospitals and nursing homes. Unfortunately, hospitals in Illinois are being forced to provide care to public assistance recipients at less than actual cost. Adequate payment must be made to nursing homes in order to provide adequate care to indigent patients.

3.) EXPANSION OF SKILLED PERSONNEL TRAINING PROGRAMS AND IMPROVEMENT OF MEDICAL AND RELATED FACILITIES FOR OLDER PEOPLE.

The need for training qualified personnel to work with older people is obvious. Training programs concerned with the health care of the aged must be directed to medical students and

physicians of all ages, nurses and all types of hospital aides, nursing home attendants, welfare workers, homemaker aides, and members of the patient's family. Special emphasis should be given to enlarging the number of persons working with older people and all groups are being urged to do more to provide adequate trained personnel for the care of the aged. The practical nurse training programs sponsored by some school districts in Illinois, in co-operation with hospitals, are helpful in providing personnel for care of aged people in both nursing homes and their own homes.

Facilities for the health care of the aged include general hospitals, nursing homes, various types of residences for the aged, and the patient's own home. The number of beds available in properly conducted nursing homes is far from adequate. The AMA has supported the provision for the amendment to the Federal Housing Act providing for insured mortgage loans to proprietary nursing homes. This legislation is badly needed because of the difficulty experienced by the proprietors of such nursing homes in procuring financing on reasonable terms.

The majority of the aged chronically ill prefer to remain with their families and the majority are able to do this. The physician must decide if the facilities of the patient's home are adequate for his care. The physician should be familiar with the facilities of his community for assisting in home care programs.

4.) PROMOTION OF HEALTH MAINTENANCE PROGRAMS AND WIDER USE OF RESTORATIVE AND REHABILITATIVE SERVICES.

The physician must assume a key role in health maintenance programs. Health maintenance is defined as a comprehensive plan that connotes preservation of the over-all health of the individual. The physician must encourage the development and wider use of restorative and rehabilitative services to all who need them. Rehabilitation is a part of the definitive medical care of the patient. The physician must be familiar with rehabilitation programs and facilities available in his community. Much can be done in small hospitals and nursing homes not having actual physical therapy departments by training available personnel other than therapists to do rehabilitation work. Such a program has been successfully sponsored in 34 nursing homes in

Illinois by the Services for Aging of the Illinois Public Aid Commission. County medical society committees on aging are being encouraged to urge the establishment of rehabilitation programs in hospitals and nursing homes.

5.) AMPLIFICATION OF MEDICAL AND SOCIOECONOMIC RESEARCH IN THE PROBLEMS OF AGING.

The AMA is encouraging and supporting research in aging. Its Committee on Research makes direct grants to physicians with acceptable research projects and informs constituent and component societies and individual physicians about current research. Research projects in aging are being supported in the medical schools, hospitals, and other institutions in Illinois. Over \$400 million is being spent annually on research in this country on chronic disease. Funds are available from the Federal Government, state agencies, numerous foundations, and the voluntary health agencies. In addition the AMA, in conjunction with other organizations, is undertaking research on numerous socioeconomic aspects of aging.

6.) LEADERSHIP AND CO-OPERATION IN COMMUNITY PROGRAMS FOR OLDER CITIZENS.

Physicians should lead and co-operate in developing programs for older people. This involves contribution of personal time and effort in community activity. Community planning for the aging can alleviate some of the heavy demands now made on our limited medical facilities. Community participation also is a means whereby the physician can assist in the wise and efficient expenditure of public funds. The physician and his county medical society should encourage local programs for older persons, especially those emphasizing the importance of self-help and independence. Community activities such as may be found in churches, Golden Age clubs, senior achievement groups, and day centers should be encouraged.

Every county medical society ought to have an active committee on aging. The committee should sponsor educational programs before county medical society meetings, publish articles in county medical society bulletins, and encourage rehabilitation programs in hospitals, nursing homes, and patient's homes. Educational programs should stress the importance of prevention

and early detection of chronic illness in the aged.

The committee on aging is in an excellent position to sponsor co-operative county groups to study all problems of aging. Such groups should consist of physicians, dentists, nurses, hospital administrators, nursing home representatives, welfare workers, clergy, United Fund and voluntary health agency representatives, and all other interested parties. Such county groups should encourage the formation of a central bureau where older people may secure advice on resources available within the community. Directories containing information regarding resources for the aged are published in several communities. The county co-operative group should encourage medical, social, and vocational services.

Organized community based home care programs are now active in several Illinois counties (Peoria, Morgan, and DuPage). Some of the Chicago hospitals sponsor hospital based home care programs. All programs include services provided by visiting nurses including bedside nursing and rehabilitation. Some programs provide homemaker activities such as planning the care of the home, cooking, and cleaning for those unable to do it themselves. Many of these programs may be organized and supported in relatively small communities with the assistance of women's service groups or similar organizations. Physicians must make themselves available to visit patients in their homes if these programs are to succeed.

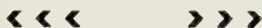
In some communities, the county group has conducted a survey to determine the needs of the

aged and available resources. Such a survey has been completed in the Bloomington-Normal area with the assistance of Illinois Normal University. Some of the county groups are having roundtable discussions or workshops on all problems of aging.

Physicians can provide good advice and counsel to the groups advocating and supporting new types of housing projects for the aged. Medical society committees must be equipped to appraise the advantages or disadvantages of proposed housing for older people, keeping in mind that oldsters must remain active, independent, integral parts of the community as long as possible.

Nursing home administrators are anxious to have the advice and assistance of the physicians of the community. The county medical society committee on aging should offer to act in an advisory capacity to nursing homes. The physician must provide adequate instructions when his patient is admitted to a nursing home and make himself available for necessary visits to the patient when the occasion requires it. Active interest by physicians will improve the standards of nursing home care.

Medicine recognizes its responsibility in providing a positive approach to the problems of the medical care of the aging. All groups must assume a comprehensive look at the total problem, and active participation by physicians, nurses, hospitals and their staffs, nursing home administrators, welfare workers, service groups, and others is necessary to solve the many varied problems facing the aged.



The Effect of Niacin on the Blood Cholesterol

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An interesting development in the study of lipid metabolism during the past few years has been the demonstration of the effectiveness of large doses of niacin in reducing the concentration of plasma cholesterol of patients with hypercholesterolemia. The discovery of this effect is another example of serendipity, since it was noted accidentally in routine studies of blood chemistry being carried out on schizophrenic patients who were being given large doses of niacin for short periods as experimental therapy.¹

Several carefully controlled studies have shown that lowered plasma cholesterol can be maintained for periods as long as 3½ years on niacin. To achieve the effect it is necessary to give niacin in large doses, usually between 1.5 and 6 gm. a day. The daily dose is divided into three parts, one being given during or after each meal. In most patients, there is a relationship between dose and effect, since the lowering of the plasma cholesterol increases when the daily dose is increased. In one series of patients with hypercholesterolemia, many of whom had been resistant to other anticholesterolemic regimens, the mean reduction of the plasma cholesterol was 17 per cent during an extended period. In some patients with plasma cholesterol values as high as 700 or 800 mg. per 100 ml., some of whom had associated xanthoma tuberosum, the cholesterol content of the plasma has been reduced to less than 200 mg. per 100 ml. and the xanthomatous lesions have involuted. As has been noted with the use of other anticholesterolemic agents and

dietary regimens, however, the degree of effect varies somewhat among different patients.²⁻⁴ A few patients with high plasma cholesterol values have been somewhat resistant to the effect of niacin.

When the methods of treatment are compared in the same patient, the effect of niacin seems to be greater than that of sitosterol and simple low-fat diets. It is equal to or greater than that of partial reduction of the dietary fats containing saturated fatty acids with replacement by fats containing a large proportion of the polyunsaturated fatty acids.

Flushing of the face and fullness in the head usually are somewhat more marked at the beginning of treatment with large doses of niacin than after smaller doses, such as 100 mg., but these reactions tend to diminish or disappear as treatment is continued. A few patients have had to discontinue large doses because of nausea, vomiting, or urticaria.

Tests of liver function in patients who have received the large doses of niacin for considerable periods have shown transient slight retention of bromsulphalein in only an occasional individual, positive reactions to cephalin-cholesterol flocculation tests in a few, and slight elevation of alkaline phosphatase in a few. In many persons, the blood sugar has been slightly elevated and the reaction to glucose tolerance tests has been positive while taking large doses of niacin. Both the effect on tests of liver function and that on blood sugar, when they have been found, have disappeared quickly after niacin has been discontinued. The possible significance of these effects on liver function tests and carbohydrate metabolism is uncertain at present.

The mechanism of the effect of large doses of niacin in reducing the plasma cholesterol in hypercholesterolemia is not known. It is of interest

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While the Nutrition Committee of the Chicago Heart Association is sponsoring this article, the opinions expressed are those of the authors and do not necessarily represent the official view of that committee.

that nicotinamide given in large doses is totally ineffective in lowering the concentration of cholesterol in plasma. Patients receiving large doses of niacin secrete fairly large amounts of nicotinuric acid in the urine.

Whereas in rabbits on experimental high-cholesterol diets, hypercholesterolemia develops consistently and lesions of atherosclerotic type appear in the aorta, these effects are minimized, and the lesions are sometimes prevented by niacin in dosages comparable to those that lower the concentration of plasma cholesterol in humans.⁵

From studies of the cholesterol content of the alpha and beta globulin fractions, lessening of the serum cholesterol in humans by administration of large doses of niacin seems to be almost entirely in the cholesterol content of the beta globulin fraction. Large doses of niacin also cause lowering of the fatty acid concentration in the plasma proportional to the lowering of the cholesterol; and they decrease the phospholipids, but to a somewhat less degree.

At present, it is impossible to say whether long term therapeutic reduction of hypercholesterolemia in humans will slow or arrest the de-

velopment of atherosclerotic lesions in the arteries or cause involution of such lesions as may be present when treatment began. However, niacin is highly suitable for such a study. It is the experience of most clinicians that, in long term preventive therapy for essentially asymptomatic ambulatory patients, oral drug therapy will be followed much more consistently than restrictive or altered dietary regimens.

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Iliac crest maneuvers

The iliac crest compression and separation maneuvers tended to reproduce the type and location of distress that occurred spontaneously in these patients with rheumatoid spondylitis. Reproduction of symptoms by the maneuvers correlated well with the presence of active clinical disease in the sacroiliac joints. When there was no other clinical evidence of active sacroilitis,

even in the face of advanced fusion and sclerosis of the joints on X-ray, the iliac crest maneuvers did not produce symptoms. It would seem logical to expect that any other active sacroiliac disease, such as tuberculosis and brucellosis, would give positive iliac crest separation-compression test results. There were no such cases in the control group studied. Stanley L. Wallace, M.D. *Physical Findings in Early Rheumatoid Spondylitis*. New York J. Med. June 15, 1959.

Duodenal Fistulas Following Subtotal Gastrectomy

JOSEPH J. SCHECHTER, M.D.* AND DAVID W. BARROW, M.D.**

Postoperative leakage of the duodenal stump following subtotal gastrectomy is a dreaded complication associated with great morbidity and significant mortality.

INCIDENCE

From 1949 through 1957 subtotal gastric resection was done 251 times. Of this number five (two per cent) developed duodenal stump fistulas — an incidence not unlike that reported by Henley and Bell.¹

Of the five patients who developed duodenal fistulas, three were males and two were females, a proportion similar to that in all gastrectomies done at the Milwaukee County Hospital. The youngest was 41, and the oldest 61 years of age. Two of the resections were done for gastric ulcer and three for duodenal. Two were done as emergencies for massive hemorrhage, and three were elective resections in patients with intractable ulcer.

All of the resections were of the Hofmeister type with antecolic anastomosis, in four of which the afferent jejunal loop was attached to the greater curvature; in one the afferent loop was attached to the lesser curvature of the gastric remnant. All duodenal stumps were closed in the usual manner, three with two layers and two with three layers. A drain was left at or near the duodenal stump postoperatively in every instance. The mortality rate of postoperative duodenal stump blowout in this series was 40 per cent (two out of five patients).

ETIOLOGY

The cause of duodenal stump blowout is not

always certain, but high priority must be given the technical difficulty encountered in closure of the duodenum in the patient with friable tissues and widespread induration and inflammation of adjacent organs as well as of the duodenum. Poor nutrition of the chronically ill and the desperate preoperative condition of the emergency patient are important in certain patients. In still others, technical factors, such as the use of actively ulcerated tissue in the closing sutures, insufficient length or twisting of the afferent loop with obstruction, or improper type and placement of drains, may be responsible. In one of our five patients an active ulcer was incorporated in the suture line, and healing did not occur. Another had obvious obstruction of a taut, kinked, short afferent jejunal loop. In the other three, multiple factors apparently were responsible.

SIGNS AND SYMPTOMS

The signs and symptoms of duodenal stump blowout are those of peritonitis from any cause plus external leakage of duodenal contents when this is possible. The diagnosis must be suspected and frequently an exploration is undertaken in any patient following gastric resection who develops more or less sudden upper abdominal pain associated with right upper quadrant tenderness, with or without bile stained drainage, without waiting for other signs of peritonitis to develop. In our five patients, symptoms attributed to duodenal stump leakage occurred on the third postoperative day in three, on the eighth postoperative day in one, and on the 32nd postoperative day in another.

TREATMENT

Treatment in patients with duodenal fistula is concerned with removal of the escaping secretions by constant suction, maintenance of the nutrition and electrolytes of the patient, and meticulous care of his skin.

In three of our patients (Cases 1, 2, and 5)

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in whom external drainage of duodenal contents occurred readily, constant suction through a catheter or sump drain was sufficient. In the patient in whom signs and symptoms of peritonitis developed, without external drainage, (Case 3) exploratory laparotomy, with the insertion of a drain down to the fistula, was considered lifesaving. (Exact location of the fistula and closure, when found, may be difficult if not impossible).

Supportive treatment with fluid, electrolytes, and particularly the liberal use of whole blood, are most important adjuncts. A feeding jejunostomy is indicated if malnutrition becomes a problem, and may be indicated as a prophylactic measure in any patient with a duodenal fistula in whom exploration must be undertaken for any other reason, i.e., drainage or obstruction.

Frequent changes of dressing, simple protective ointments, and constant suction, combined with the face-down position on a Stryker frame, have been successful in controlling skin irritation in our experience. We have had no experience with some of the other methods mentioned favorably by others.²

MATERIAL AND RESULTS

Two patients mentioned previously (Cases 1 and 2) drained spontaneously through the wound. Complete recovery followed the use of sump drainage and supportive care.

Case No. 1—E.M.—538737: A 50 year old white male complained of hematemesis and epigastric pain for the past 10 years. Barium study revealed a pyloric ulcer with a severely deformed duodenal cap. Despite a myocardial infarction one year previously, he was thought to be intractable and an elective gastric resection was done.

A posterior wall ulcer densely adherent to the pancreas was found at the pylorus and 70 per cent of the stomach was resected. An antecolic anastomosis was done, with the afferent jejunum attached to the greater curvature of the gastric remnant. The duodenal stump was closed in two layers. A drain was introduced down to the area of the duodenum.

The patient developed a partial separation of the wound on the sixth postoperative day. This closed progressively, but on the 32nd day, bile stained fluid and some excoriation of the skin was noted. Sump drainage and intensive nutritional measures were instituted. The patient was discharged, with the wound healed, one month later. (Two years later he died of another myocardial infarction).

Case No. 2—T.R.—473139: A 61 year old white male complained of vomiting blood and passing tarry stools.

Blood was given and the patient responded to therapy. A barium study revealed a gastric ulcer on the lesser curvature, with fixation to the surrounding tissues. Because of the likelihood of malignancy, surgery was recommended, which the patient refused. While in the hospital he began to bleed again, and emergency gastrectomy became necessary.

A benign ulcer adherent to the pancreas was found on the lesser curvature. A 70 per cent gastric resection was done, with an antecolic anastomosis with the afferent jejunum placed at the greater curvature of the gastric remnant. The duodenal stump was closed in two layers and tacked into the pancreatic capsule. A drain was inserted in the region of the stump. On the third postoperative day the patient became distended and drained bile stained fluid from the wound. Sump drainage was started and electrolytes maintained. The drainage gradually lessened and stopped after six weeks. The patient was discharged healed.

Patient No. 3 drained spontaneously for 12 hours through the drain site. Then the drainage stopped, and signs of generalized peritonitis developed. The patient was explored to establish drainage, with recovery.

Case No. 3—W.S.—01-17-01: A 43 year old white male complained of epigastric distress and repeated hematemesis of three years, duration. Two years prior to entry he had had a perforation closed elsewhere. Medical advice had not been followed. Barium study revealed a gastric ulcer on the lesser curvature in the pars pylorica.

At surgery a benign ulcer was found in the above location, adherent to the pancreas. The greater omentum was removed with 70 per cent of the stomach. An antecolic anastomosis was performed, with the afferent loop of jejunum placed at the greater curvature. The stump of the duodenum was closed in three layers with no difficulty, and was tacked to the pancreas. A drain was placed in Morrison's pouch.

Postoperatively the patient developed transient atelectasis. On the third day there was some bloody discharge from the drain site. On the sixth day bile stained fluid came out. Catheter suction was instituted and the fistula drained for 12 hours and then stopped. At this point the patient developed diffuse abdominal pain and the signs of generalized peritonitis. At exploration the afferent loop of jejunum was extremely short and taut. This was relieved by freeing up the ligament of Treitz. Drainage was established in the right upper quadrant, and a feeding jejunostomy was done distally. Recovery was uneventful and drainage stopped in four weeks. (At the original surgery his greater omentum was removed along with the gastric ulcer. Because of the absence of an omentum he probably was not able to localize the drainage to the right upper quadrant).

In the fourth patient diagnosis was not made prior to autopsy. The need for suspecting the diagnosis is obvious.

Case No. 4—R.W.—356331: A 41 year old white female complained of upper abdominal pain of eight

months' duration. She had been on a medical regime for a proved duodenal ulcer without relief. On the 12th hospital day she began to vomit blood and promptly collapsed. Despite repeated transfusions she continued to bleed and was taken to surgery.

An ulcer 2 cm. in diameter was found on the posterior wall of the first portion of the duodenum, adherent to the pancreas. A 50 per cent gastric resection was done. The anastomosis was a Hofmeister type, antecolic, with the afferent jejunum placed at the greater curvature. The duodenum was closed in three layers. A Penrose drain was placed in the vicinity of the duodenal stump.

The Levine tube worked poorly after operation, and on the third day the patient had severe right upper quadrant pain and drained bloody fluid from the wound. Proper treatment was not effected and the patient died in 24 hours. At autopsy the duodenal stump was opened and a 2.5 cm. ulcer was found in the duodenum in the suture line.

Patient No. 5 developed multiple complications. The fistula had healed following sump drainage and jejunostomy, but the patient died from multiple intra-abdominal abscesses and stomal obstruction of the gastrojejunostomy.

Case No. 5—R.M.—446530: A 52 year old white female had had three episodes of bleeding necessitating transfusions in the past 10 years. The latest was prior to admission. She had had a Miles resection for carcinoma of the rectum 23 years previously. A barium study showed a duodenal ulcer.

At surgery a posterior duodenal ulcer was found densely adherent to the pancreas. A 75 per cent gastric resection, with an antecolic anastomosis, with the afferent loop of jejunum placed at the lesser curvature of the gastric stump, was done. The duodenum was closed without difficulty in three layers. A drain was placed in the region of the stump.

On the first day after surgery there was blackish drainage from the wound. On the third day it was bile stained. Catheter suction was applied and other supportive measures were carried out. She developed a subhepatic abscess which was drained. From time to time intermittent stomal obstruction of the gastrojejunostomy developed. Exploration was done, but no organic cause could be found. A feeding jejunostomy was done. The patient died 2-1/2 months after operation. The fistula had healed at seven weeks.

DISCUSSION

Good results were obtained in three of the four patients in whom the development of a duodenal stump blowout was recognized promptly, and treatment instituted immediately. Needless to say, all of them would have been much better off if the complication could have been avoided entirely. The problem is a very real one in the patient with an indurated ulcer in whom the situation may be further complicated by

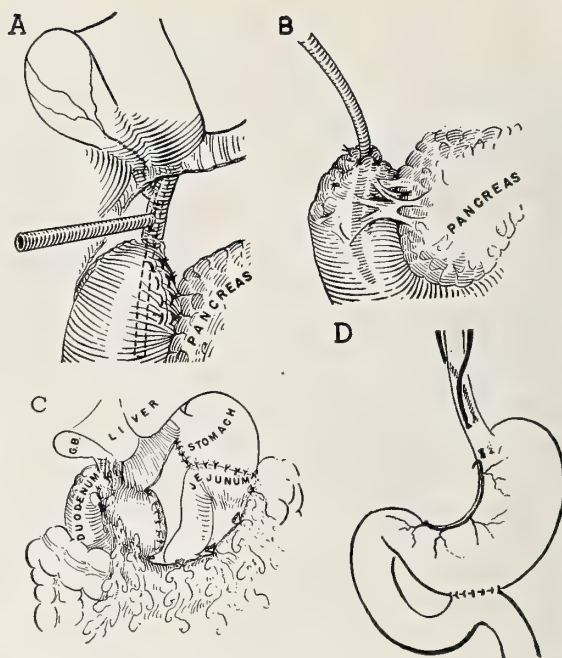


Figure 1. Alternatives to the usual resection and closure of the duodenal stump.

- A. Insertion of a "T" tube in the common duct during difficult duodenal dissection (after Lahey).
- B. Catheter duodenostomy (after Welch).
- C. Two-stage procedure (after McKittrick).
- D. Vagotomy and posterior gastroenterostomy (after Dragstedt).

longitudinal contracture from previous healing. Many solutions have been suggested, and according to the late Dr. F. H. Lahey³ the choice of the various methods and the success with which they are applied by any individual surgeon, determines almost entirely the morbidity and mortality of the patients from whom part of the stomach is removed.

Insertion of a "T" tube in the common duct during difficult duodenal dissection was suggested by Lahey³ in an attempt to minimize biliary tract complications. Welch and Rodkey⁴ suggest closure of the friable duodenum around a catheter with immediate suction as a satisfactory "out". Division of the stomach, with diversion of gastric contents through the jejunum, is followed by subsidence of the inflammatory reaction around the duodenum, facilitating its dissection at a second (later) operation. Such a two-stage procedure was found satisfactory by McKittrick⁵ et al. Others⁶ have added vagotomy to this transection of the stomach, with or with-

out excision of the distal stomach at a subsequent operation, and reported success. Removal of the antral factor in gastric secretion by excision of antral mucosa without removal of the muscular and second coats has been reported upon favorably by others.⁷ Vagotomy and posterior gastroenterostomy⁹ in the treatment of patients with duodenal ulcer eliminates duodenal dissection entirely, and has been considered preferable to gastric resection in patients in whom a difficult duodenal closure is to be anticipated (Figure I).

Each of these suggestions has been useful to us under certain unusual, infrequently encountered circumstances. However, patients in whom duodenal fistula will develop cannot always be determined during surgery, and such methods are not seen to be necessary at the time of operation. But once duodenal blowout has occurred, the establishment of completely free drainage, constant suction, and adequate nutritional and electrolyte support must receive priority.

SUMMARY

Failure of the duodenal stump to heal is an ever present hazard associated with gastric surgery.

Duodenal fistula is more likely to occur in patients with large areas of edema and inflammation around as well as in the ulcer, and in patients who develop obstruction in the duodenal loop.

Treatment consists of provision for free aspiration with suction of the escaping contents, nutritional and electrolyte support of the patient, and care of the skin.

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Die in peace

There is another philosophy involved in the problem — that of the patient. Does he really want the cure or relief which surgery has to offer? All too often we are faced with the elderly person whose children have cajoled him into going to see the doctor who, in turn, has added his voice in insisting he should submit himself to the surgeon for operative treatment. Maybe the old man doesn't want to get well; maybe he finds himself a burden to all; maybe he has been hunting a way out of all the misery of living.

I firmly believe that, after explaining what can be expected of surgery and what can be expected without surgery, if the patient still says "I'll just die natural without your help," we should wish him Godspeed and respect his choice of how he should die, if, indeed the pathology points inevitably to death. Of course, we may well see him again as an acute surgical emergency instead of as an elective patient, but, in the meantime, maybe he will have had a few good months or years. *O. Emfinger, M.D. Special Problems in Surgery of the Aged. J.M.A. Alabama July 1959.*

Growing Need For Medicolegal Co-operation

MR. C. JOSEPH STETLER, CHICAGO

In any discussion of medicolegal affairs I believe it is desirable to reflect at the outset, if only briefly, on the fact that within the last 30 years the practice of medicine has become increasingly complex and that during this period related legal problems have increased correspondingly. I am not expert enough to do justice to all of these problems but would like to allude to a few that are especially important. Included would be the role of the physician as a medical witness, medical professional liability, and specific examples of ways to improve the understanding and co-operation between physicians and attorneys.

The most important areas of legal complications in medical practice involve medical professional liability. Although not a new problem, through a combination of recent circumstances, it has demanded an inordinate amount of attention from individual physicians and medical organizations. Some of the causes for this increased emphasis are the tendency of the public to seek financial remuneration for real or imaginary damages; more frequent and higher jury awards; and inflation, necessitating higher payments for claims, judgments, and defense.

Unfavorable articles in lay magazines dealing with higher costs of medical care in general have created antagonism against the physician, while the favorable articles on new drugs and modern surgery and methods of treatment have in some instances been sufficiently exaggerated to lead the public to believe that a less than perfect result must be evidence of negligence.

Facing the facts, there are cases of actual malpractice in which a patient suffers injury as a result of accidents, carelessness, or ignorance on the part of the physician. No matter how ethical and cautious a physician may be in his pro-

fessional and business relations with others, legal difficulties sometimes are inevitable. It has never been nor will it ever become our purpose to try to avoid responsibility for the physician in these cases; the patients involved deserve to be and should be compensated. That is why physicians carry professional liability insurance.

However, as a result of a study of medical professional liability we have been conducting for the past two years, we have substantiated what we have felt for a long time to be the case: the vast majority of all professional liability claims and suits are not justly founded. If the present trend continues, and if physicians must become increasingly apprehensive of lawsuits, their own aggressive instincts will inevitably overcome their humanitarian and professional motivations in some measure. The physician then tends to give too much time to protecting himself and less to the care of his patient. He may hesitate to assume responsibility in a case where the prognosis is poor. He will be inclined to omit the highly successful but slightly dangerous medical procedures. Whether medically indicated or not, he will exhaust every established laboratory aid in every case and will, on the slightest provocation, bring consultants into the case. He will prefer to keep the patient in the hospital longer than is necessary. By these means, although the cost to the patient is increased, the hazard to the attending physician will be reduced.

The evils of this situation are as important to an attorney and to the general public as they are to the medical profession. If the matter is approached properly with the legal profession, this fact will be apparent. Therefore, we have initiated an effort at the national level to acquaint attorneys with various facets of this subject and would suggest that you consider a similar approach at the state level.

Before joining the legal staff of the AMA several years ago, I had the impression that physicians, like clergymen, seldom were involved in litigation. I have since learned that is not the

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case. Physicians are familiar figures in the courtroom today not only as medical witnesses but as litigants. Another fact, which you know better than I, is that there is a great reluctance on the part of physicians to become involved in legal affairs.

The American Medical Association has been concerned with the so-called battle of the medical experts in personal injury cases since 1914. In that year, a special committee of our House of Delegates suggested that medical opinion testimony be limited to experts called by the courts. The House of Delegates did not fully endorse this recommendation but suggested instead that an effort be made to solve the problem through co-operation with the American Bar Association.

The fundamental reason why the problem was not solved in the ensuing 45 years, with or without the co-operation of the American Bar Association, may have been the almost universal aversion of physicians to appear in court and testify in a lawsuit. It is unfortunate but true that the average physician's attitude toward a court appearance was summed up in an article published in *The Journal of the American Medical Association* by a man who is a physician and lawyer.¹ He said, in part:

"To the physician, the courtroom means wasting valuable time to give a carefully restricted opinion, necessarily based on inadequate observation, for persons who cannot understand the details of the problems and who probably will not believe him anyway."

To the physician who thinks this way the typical trial lawyer is a silver-tongued oracle who delights in mortifying medical witnesses and who has a mysterious ability to wind judges and juries around his finger. Fortunately for all of us, this Perry Mason type of character exists almost exclusively in fiction, TV, and the movies. Physicians are amazed to find that most lawyers are quite human, with normal reactions, such as respect for a brother profession and a willingness to regard physicians as their partners in a joint venture — the administration of justice.

Seriously though, the physician's reaction to this situation has some logic and deserves serious consideration. Most important is the fundamental difference in the method of approach of law and medicine so far as the discovery of truth is concerned. The lawyer attempts to maintain

his position by argument and contention with opposing counsel. His life is one of advocacy of causes; his object is to magnify his own arguments and belittle those of his opponent.

The physician, on the other hand, works in the free and open atmosphere of the laboratory, hospital, sickroom, or private office. He demands a full and frank discussion and disclosure of all phases of a case. Finally, after all the pertinent facts have been collected, he correlates them and forms a judgment with reference to the illness. By training and practice, therefore, the whole tempo and attitude of the day-to-day experience of the physician and lawyer are totally different.

The need for determining the extent of our medical testimony problems and for finding workable solutions is obvious when we realize that from 65 to 80 per cent of all litigation in our courts today requires some type of medical reports or testimony or when we consider that seven out of 10 personal injury cases are decided on medical rather than legal considerations.

The American Medical Association is convinced that the role of the medical witness must not be played by only a few physicians. It is appalling to note the unprofessional and unethical action of the few physicians who have become professional witnesses for plaintiff and defense counsel. We consider this new medical specialty an injustice to the profession and to the public and intend to do our best to eliminate it. In this endeavor, we are seeking the active as you do that whenever a physician is testifying assistance of the legal profession, for we know improperly there is at least one lawyer encouraging and coaching him.

We are convinced that to define and solve these problems, we must get around to the other point I mentioned — that is, to establish specific techniques for improving the rapport and understanding between medicine and the law. Physicians and lawyers, as members of two great professions and as individuals must stop sniping at each other and concentrate on establishing a feeling of mutual trust and confidence.

It has been my good fortune during the past few years, as Director of the Law Division of the American Medical Association, to be in an advantageous spot to observe interprofessional activities and to assess their effectiveness. It is my observation that the working relationship between physicians and attorneys during the past

12 to 18 months has improved and this improvement has not happened by accident. One of the most important factors in this improved relationship is the promulgation of interprofessional codes.

The Cincinnati Bar Association and the Cincinnati Academy of Medicine were among the first groups to adopt formally an interprofessional code. Following their leadership, over 25 other cities and states have either adopted or are actively studying such a document. In general, the codes that have been adopted, contain provisions relating to written reports to be furnished by the physician; conferences between physicians and attorneys prior to trial; arrangements made in advance for the physician to testify; the conduct of a physician while on the witness stand; and the compensation paid.

While it is generally acknowledged that these codes will not, in and of themselves, eliminate interprofessional friction, they provide the basis for a frank discussion of the existing problems and a set of ground rules which, if enforced, would bring improvement.

Two months ago at the American Medical Association's annual meeting in San Francisco, our House of Delegates adopted a "National Interprofessional Code for Physicians and Attorneys." This same Code was adopted by the House of Delegates of the American Bar Association. It is very much like many of the other codes that had been adopted. There are sections dealing with medical reports, conferences of physicians and lawyers, the issuance of subpoenas for medical witnesses, fees for the services of a physician relative to litigation, and the payment of medical fees. In addition, it contains what I consider to be a most important new provision — namely, a section relating to the handling of a complaint or criticism by a member of one profession against the other.

Recently we have witnessed the public airing of criticisms and complaints by members of one profession against the other. These remarks have provided headlines and good copy for newspapers and periodicals and have given the authors nationwide publicity. But they have in no way enhanced either profession in the public's eye or improved interprofessional relations.

An example of this is a talk given by a physician at a meeting held in Los Angeles. The

New York *Times* reported that the physician in question compared all lawyers to "Brooklyn cowboys with blank cartridges who brutally attempt to undermine the testimony of medical expert witnesses for the sole purpose of making money." He said he spoke from 20 years of personal experience on the witness stand in the hands of attorneys whose purpose was to "aid in the hold-up and run with the loot."

That talk, bad as it was, may well have been provoked by an article entitled, "Is Medicine Above the Law?" which appeared in *Medical Economics*. The author is an attorney from California who for years had dedicated much of his time to the purveyal of highly inaccurate and detrimental propaganda concerning the medical profession.

Fortunately the persons responsible for these unrestrained remarks are exceptions to the rule. It is obvious to most members of our professions that an honest effort has been made during the past few years to improve the application of medical science to the administration of justice.

The medical profession is willing to admit that in the practice of their profession, human errors are made. It realizes also that physicians need to be educated to their responsibility to testify in court in various types of cases. It is necessary to make a closer review of medical testimony of the type that is solicited and presented, on occasion, for plaintiffs and defendants. All agree that a better rapport between the legal and medical professions is an absolute necessity. It is equally obvious that the mere existence of these facts and the need for improvement falls far short of the medical conspiracy that has been so glibly and irresponsibly alleged by some.

The American Medical Association, the American Bar Association, and many of the state and local medical and legal societies are just now becoming sufficiently acquainted with the mutual problems of medicine and law to initiate concrete efforts at better understanding. The success of these efforts requires the assistance of all ethical and honest physicians and attorneys in the best interests of the public as well as the profession. I hope that the efforts in this field at the state and county level will be accelerated and that physicians will call on us at the American Medical Association if we can assist in any way.

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CASE REPORTS



Acute Carbon Tetrachloride Poisoning

I. L. SCHWEITZER M.D., FREEPORT

Acute carbon tetrachloride poisoning is a medical problem that deserves periodic re-emphasis. Smetana¹ analyzed 141 cases from the literature in 1939 and Hardin² collected an additional 70 cases between 1939 and 1953. Reports and editorials in the more recent literature^{3,4,5} indicate the rate of acute poisoning remains excessive and missed or delayed diagnosis is still common.

Carbon tetrachloride is used widely: in industry as a degreaser and solvent; in the home as a dry cleaning agent, fire extinguisher, dry hair shampoo, and antihelminthic; and on the farm in the fumigation of grain and silage.

The diagnosis of carbon tetrachloride poisoning frequently is missed because a history of exposure is not obtained. This is sometimes due to the patient's confusion and sometimes to the physician's not keeping this possibility in mind. Signs and symptoms usually point to renal and hepatic injury. Jaundice, abdominal pain, costovertebral angle pain, oliguria, renal casts, and albuminuria are most common but pulmonary edema, diverse hemorrhagic phenomena, and signs of cerebral edema occur also.

This is the report of six patients with acute carbon tetrachloride poisoning. Four were poi-

soned while cleaning equipment in a small room and two while fumigating a farm silo.

Case 1: This 22 year old white male felt well until two days before admission when he became somewhat tired and dizzy. The following day he developed crampy abdominal pain, nausea, and vomiting. Pain persisted and on the morning of admission he collapsed while getting out of bed.

Physical examination on admission revealed a moderately ill white male who was somewhat confused but oriented as to time and place. The blood pressure was 170/120, the pulse 60, and the temperature 100.2 degrees F. There was epigastric, suprapubic, and bilateral costovertebral angle tenderness. The remainder of the examination was essentially negative.

During the first night the patient had massive hematemesis. The total vomitus was 2,000 cc. with an estimated 1,000 cc. of bright red and dark clotted blood. The blood pressure fell to 110/60, the pulse rose to 120, and the hemoglobin was 12.5 gm.% with a hematocrit of 36%. Only 25 cc. of urine was excreted during the night. Urinalysis revealed a specific gravity of 1.012, albumin 4 plus, and many erythrocytes, leukocytes, and granular casts per high power field.

The next morning the patient's co-worker was admitted with a similar syndrome and a clear history of carbon tetrachloride exposure. It was

From the Department of Medicine, Freeport Clinic, Freeport.

then learned that the patient had cleaned equipment with carbon tetrachloride in a small room for about eight hours the day before his illness began. The patient denied alcohol intake either before or subsequent to exposure.

Treatment consisted of daily infusions of 10 per cent glucose in water, the amount based on the urine output plus vomitus and estimated insensible fluid loss. There was no further hematemesis but the stools remained black for seven days. The blood pressure rose to 150/90 and remained in that range until the 14th day when it gradually fell to 130/80. Recurrent abdominal pain, nausea, and occasional emesis persisted for seven days. The 24 hour urine output varied from 110 to 320 cc. until the seventh day when he excreted 1,170 cc. Diuresis increased until the 13th day when a maximum of 4,150 cc. was excreted. The NPN rose to a peak of 184 mgm.% on the seventh day and returned to normal gradually. All symptoms subsided with the onset of diuresis. PSP excretion, urea clearance, and urine concentration-dilution tests were normal by the third week.

COMMENT

This case of carbon tetrachloride poisoning presents the following features of interest.

A. Diagnosis was not made initially because the history was not taken in enough detail. Though the patient was questioned in a general manner regarding exposure to toxic products, the use of carbon tetrachloride as a cleaning agent was not specifically inquired into and the clew was missed.

B. Massive hematemesis dramatically dominated the early hospital course.

C. The typical evolution of acute renal failure with tubular necrosis occurred and responded to careful medical management.

Case 2: This 32 year old white male was exposed to carbon tetrachloride for about four hours three days prior to admission. Two days prior to admission he developed diffuse crampy abdominal pain and frequent emesis containing flecks of blood. Symptoms persisted and his urine became brown. Alcoholic intake was denied.

Physical examination on admission revealed a moderately ill white male. The blood pressure was 160/100, the pulse 100, and the temperature 99 degrees F. There was moderate tenderness over both costovertebral angles. The liver edge

was not palpable but some tenderness was noted beneath the right costal margin. There was slight scleral icterus. Urinalysis revealed many erythrocytes and leucocytes per high power field, albumin 3 plus, and many granular casts. The NPN was 108 mg.% and the BUN 68 mg.%. The serum bilirubin was 1.2 mg.%, the thymol turbidity 6 units, and the cephalin flocculation 2 plus.

The patient continued to have abdominal pain, nausea, and headache during the first hospital week. During this period his 24 hour urine output varied from 10 to 700 cc. and his NPN rose to 126 mg.%. He was treated with controlled infusion of 10 per cent glucose in water and electrolyte restriction. By the ninth day moderate diuresis ensued and was followed by a steady decrease in symptoms. Scleral icterus persisted till the 11th day. The liver function tests returned to normal by the end of the second week and the PSP, NPN, urea clearance, and concentration-dilution tests were normal by the end of the third week. His blood pressure stabilized at 140/90 during the second week.

COMMENT

This case represents carbon tetrachloride poisoning with evidence of both renal and hepatic injury of moderate degree. Healing occurred rapidly with conservative medical management.

Case 3: This 28 year old white male cleaned equipment with carbon tetrachloride in an unventilated room for about 50 minutes. A few hours later he developed headache, sweating, generalized abdominal pain, bilateral flank pain, and vomiting. Physical examination was negative except for minimal, generalized abdominal tenderness and bilateral costovertebral angle tenderness. Laboratory studies including hemogram, multiple urinalyses, and liver and kidney function tests were normal. All signs and symptoms resolved within 48 hours.

Case 4: This 21 year old white male cleaned equipment for about 30 minutes in an unventilated room with carbon tetrachloride. The following day he suffered malaise, general muscular aching, and pain in abdomen and back. Physical examination was negative except for mild, diffuse, abdominal tenderness and bilateral costovertebral angle tenderness. Laboratory studies

including hemogram, urinalysis, and liver and kidney function tests were normal. The patient felt entirely well and all physical signs resolved within 36 hours.

Case 5: This 64 year old white male developed nausea, dizziness, and weakness while fumigating a farm silo with carbon tetrachloride. Physical examination was negative except for moderate toxicity and dehydration. Hemogram and urinalysis were normal. He vomited four times the first hospital day and twice on the second but there was no hematemesis. He was treated with glucose in water infusions and recovered rapidly after the second hospital day.

Case 6: This 60 year old white male developed nausea, vomiting, headache, and confusion and then collapsed while fumigating a farm silo with carbon tetrachloride. Physical examination was negative except for moderate confusion. A hemogram and urinalysis were normal. The patient vomited once the first hospital day but was asymptomatic and mentally clear by the second day.

COMMENT

Cases 3 through 6 represent mild carbon tetrachloride poisoning. Physical findings were variable and laboratory examinations were normal. In such cases diagnosis rests entirely on the history. Many such cases remain undiagnosed and many more do not even seek medical aid. Therefore, reported cases probably represent but a fraction of the true incidence of carbon tetrachloride poisoning and effective education of the public regarding the danger of this chemical is in order.

DISCUSSION

Symptoms of carbon tetrachloride poisoning may be divided into the immediate and the delayed. Immediate symptoms occur within an hour or two after exposure and are due to the direct toxic effect of the chemical. Dizziness, headache, nausea, and vomiting are most common as illustrated in cases 3, 5, and 6. Delayed symptoms appear one to three days after exposure and are due to the organ-system damage

resulting from the poisoning. Oliguria, jaundice, abdominal pain, and hemorrhage are most common as demonstrated in cases 1 and 2. Acute renal failure due to carbon tetrachloride is clinically and pathologically identical to tubular necrosis following shock, crush injuries, hemolytic transfusion reactions, and other renal tubular injuries.

Treatment consists of limiting fluid administration to the amount of fluid lost via urine excretion, vomiting, and diarrhea plus the estimated fluid lost via perspiration and respiration. Electrolytes should be severely restricted in an attempt to prevent edema and hyperkalemia. If renal failure is severe or progressive, extrarenal dialysis with the artificial kidney may be life saving.⁶ Hepatic injury may vary from minimal centrilobular to massive total necrosis. Treatment is mainly supportive, with adequate carbohydrate and vitamin administration. Hemorrhage probably is due to a combination of azotemia, hepatic insufficiency with hypoprothrombinemia, and a direct toxic effect on the smaller blood vessels. Blood replacement is indicated according to the amount of blood lost and the clinical picture.

SUMMARY

Six patients with acute carbon tetrachloride poisoning are reported. Massive gastrointestinal hemorrhage, renal tubular necrosis, toxic hepatic necrosis, and immediate symptoms were manifested. The practicing physician should play an active role in effective public education which can reduce the incidence of this disease.

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Clinical-Surgical Conferences



Bleeding Esophageal Varices

*Department of Surgery
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Moderator:

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Director of Surgical Education,
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Discussants:

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School of Medicine of Loyola University;
Education Department, Cook County Hos-
pital

DONALD D. KOZOLL, M.S., M.D.
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Dr. Robert J. Freeark: Elevation of the pressure in the portal vein and its tributaries gives rise to a host of medical and surgical problems that are all too frequent in the wards of a large charity hospital. While portal hypertension may occur as a result of interference of venous flow into or out of the liver, the majority of these cases result from interference of venous flow within the liver. The underlying disease is most often Laennec's cirrhosis and its pathogenesis is usually related to chronic alcoholic excesses.

The most dramatic and challenging of the many consequences of this portal venous block is the development of varicose veins in the lower end of the esophagus as the body attempts to bypass the liver by shunting portal blood into the azygos and caval system. The rupture of these varicose veins results in gastrointestinal bleeding

of fantastic proportions and constitutes a metabolic insult that the cirrhotic patient has difficulty in surviving.

It is with the specific problem of bleeding esophageal varices that we would like to concern ourselves today. Its combined medical-surgical aspects are reflected in our selection of discussants. Dr. John Tobin was a logical choice. He is an outstanding internist with a comprehensive knowledge of liver disease, hemorrhagic disorders, and the metabolic derangements they precipitate. In addition, he heads the blood bank at this institution and no one deals more directly with this problem than the man charged with keeping that bank filled up. After treating a series of cases of bleeding varices with the Sengstaken-Blakemore tube, Dr. Tobin has been responsible for the reorganization of our thinking on the efficacy of this tube.

As will be discussed this tube consists of a series of soft inflatable balloons that upon insertion into the esophagus and careful positioning, can be utilized to compress the esophageal veins and arrest their bleeding. Several years ago two of our surgical residents, Dr. Joseph T. Sheridan and Dr. Robert Baker, utilized this method in the treatment of some 58 consecutive cases of bleeding esophageal varices. Not one of this group left the hospital. The majority of them stopped bleeding but they quickly fell prey to other difficulties and died, usually in hepatic failure.

Dr. Tobin's record with a series of these cases is much better and he has convinced us of the potential benefits and salvage of this method of therapy.

Dr. Tobin's enthusiastic efforts on behalf of these patients were antedated at this institution by a member of our surgical staff. For many years Dr. Donald D. Kozoll has worked tirelessly in the investigative and therapeutic aspects of this problem. He is the author of a wealth of surgical literature on diseases of the liver and biliary tract, and for many years was our sole proponent of surgical therapy for the problem under discussion. While an outstanding and capable technician, few surgeons can bring to this discussion a comparable background and experience in the problem of the bleeding esophageal varix.

CASE HISTORY:

Dr. Richard Grossman (Surgical Resident): This 61 year old white male was admitted to Cook County Hospital on May 29, 1959, because of massive hematemesis beginning one hour prior to admission. An accompanying relative stated that the patient had been a chronic alcoholic for many years with recent increase in consumption. For the week prior to admission he had been institutionalized for an alcoholic "cure." The present episode began one day following discharge from that institution. There was a questionable episode of hematemesis two months earlier, and the patient acknowledged intermittent rectal bleeding for the past two months attributed to hemorrhoids.

On physical examination there was dry and fresh blood in the mouth but the patient appeared in no distress. His blood pressure was 156/74 mm. Hg, pulse rate 120 per minute and temperature 98.6° F. rectally. He was well developed and well nourished with none of the usual stigmata of cirrhosis. There was a questionable icteric tint to the skin. The liver was 7.5 cm. below the costal margin and not tender. The spleen was readily palpable 5 cm. below the rib cage. There was no evidence of ascites, and the remainder of the physical examination was not remarkable.

Laboratory study revealed a hematocrit of 35 per cent, prothrombin time 40 per cent of normal, and the urine contained urobilinogen ++

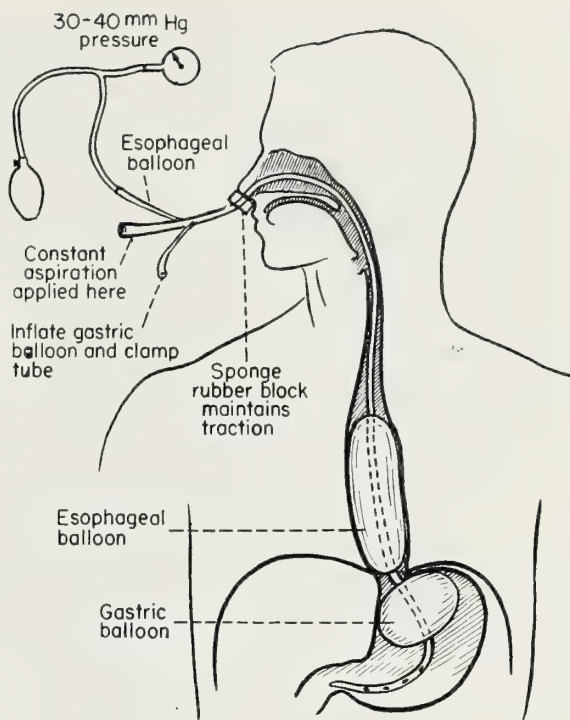


Figure 1

++ without other abnormalities. The liver profile revealed the following:

Total protein	6.6 gm. %
Albumin	3.1 gm. %
Globulin	3.5 gm. %
Interus index	43 units
Alkaline phosphatase	4.9 mg. %
Cephalin flocculation	2+
Thymol turbidity	2.4 units
Gamma globulin	1.1 gm. %

The patient was admitted at 6 a.m. and about an hour later vomited approximately 1,000 cc. of bright red blood. A Sengstaken-Blakemore tube was introduced into the stomach through the nose and the balloons inflated (see diagram in Figure 1). The patient was given 3 units of blood. His general condition remained stable with only minimal bloody return from the stomach until 8 a.m. the next day. Throughout this day after admission the gastric return was free of blood. Twenty-four hours later we deflated the esophageal balloon and massive bright red bleeding quickly ensued. We filled the balloons a second time with prompt arrest in bleeding. The patient was seen by the attending staff at 2 p.m. the following day and when bleeding recurred with a second attempt at deflation, sur-

gery was advised. At 10 p.m. that night he was taken to the operating room. Prior to surgery he had received neomycin, milk of magnesia, and repeated enemas in an effort to empty the intestines of blood and reduce the bacterial production of ammonia.

Dr. Freeark: Dr. Tobin, this patient was a unique County cirrhotic — he looked in good shape. His general condition was far better than any cirrhotic with bleeding that I have seen. The diagnosis seemed obvious on the basis of the history and physical findings, and he was therefore, a fairly clear-cut problem in therapeutics, unlike many of our gastrointestinal bleeders. How would you proceed in such a case?

Dr. John Tobin: You are all aware that massive upper gastrointestinal hemorrhage sufficient to produce hematemesis and hemorrhagic shock is a grave medical emergency in any patient, but the gravity of the problem is magnified in the patient with cirrhosis of the liver. My interest in this problem has been stimulated by its frequency, its mortality rate, and the tremendous blood bank deficits which seem to accrue to our service whenever we receive more than our share of such patients.

The cirrhotic patient with hematemesis succumbs not only from exsanguination and hemorrhagic shock but from hepatic coma. The patient's hemorrhage may cease and hemorrhagic shock may be successfully treated, but without additional therapy his diseased, anoxic liver is overwhelmed by the sudden increment of nitrogenous substances in the portal circulation. These nitrogenous substances are the products of proteolytic digestion of whole blood in the gastrointestinal tract. It is obvious that any effective plan of management must establish the diagnosis, control the hemorrhage, and prevent hepatic coma.

Westphal, in 1930, was the first to control hemorrhage from esophageal varices by tamponade. Rowntree, Zimmerman, Todd, and Ajac described the first successful application of this technique in the United States in 1947. Subsequent publications by Patton and Johnson; Sengstaken and Blakemore; Reynolds, Freeman and Windsor; and Nachlas have all championed and popularized esophageal tamponade. These authors are agreed that if the tube is properly placed, esophageal tamponade not only controls hemorrhage from esophageal varices but enables

one to distinguish quickly esophageal from post-esophageal hemorrhage. This observation is of particular interest to us, since in cirrhotic patients, there is a high incidence of bleeding peptic ulcer (15 to 20 per cent). We were encouraged by these observations and, despite the admonitions which are contained in several articles devoted entirely to the complications of the use of esophageal tamponade—we have devised a plan of therapy which has been altered by experience and emerges in its final form as follows:

I. METHOD

A. Material

1. Sengstaken-Blakemore tube.
2. Silicone jelly.
3. Surgical lubricant.
4. Glass Y-tube.
5. Anaeroid manometer.
6. A 50 ml. syringe with adaptor
7. Hemostats (two)
8. Sponge rubber pad. (4 x 4 cms.) with a central hole for the Sengstaken-Blakemore tube.
9. Adhesive tape.

II. PROCEDURE

- A. If the patient is unusually restless and agitated, he may be sedated by a small dose of Demerol® or Sparine®. *Caution:* Cirrhotic patients tolerate such medications poorly. A minimal effective dose should be given.
- B. Pass the Sengstaken-Blakemore tube through the sponge rubber pad, sliding the pad to the upper end of the tube.
- C. Coat the lower 40 cm. of the Sengstaken-Blakemore tube with silicone jelly and allow to dry. Dip the lower portion of the Sengstaken-Blakemore tube in surgical lubricant and pass the tube through the nose into the nasopharynx. If the patient is able to co-operate, ask him to sip water through a straw, and simultaneously pass the tube into the esophagus. Pass the tube until the 40 cm. mark is at the nares.
- D. Inflate the gastric balloon with 200 ml. of air and withdraw the tube until a steady tension can be exerted. Slip the sponge rubber pad down the tube to the nose and tape around the tube and over the pad to hold the tube firmly in place.

- E. Inflate the esophageal balloon with air sufficient to record a pressure of 30 mms. of mercury on the anaeroid manometer which has been attached to this lumen of the tube through a glass Y-tube.
- F. Clamp both the gastric and esophageal lumens of the tube with hemostats.
- G. Irrigate the stomach with tap water until the washings are returned clear or until you are satisfied that the bleeding is post-esophageal. If the bleeding is postesophageal, deflate both the gastric and esophageal balloons and leave the tube in place. Your surgical consultant should be called. If the bleeding is believed to be from varices, leave the balloons inflated.
- H. The following medications should be administered promptly:
 1. Oxygen.
 2. Anti-cholingeric drugs.
 3. Saline cathartic.
 4. Neomycin—1 gram, 4 times a day.
 5. Cleansing enemas, daily.
 6. Whole blood.
- I. When the tube has been in place for a period of 24 hours, the gastric and esophageal balloons are deflated but the tube is not removed. The patient is observed carefully for recurrence of bleeding. If bleeding recurs, the gastric and esophageal balloons are re-inflated, and the surgical consultant is called. The gastric and esophageal balloons remain inflated for another 24 hours. They are then deflated and a second period of observation follows:
- J. When the gastric and esophageal balloons have been deflated for a period of 24 hours with no recurrence of bleeding, the tube is withdrawn. This must be done with care. The patient is given 2 oz. of mineral oil to swallow around the tube approximately 30 minutes before it is withdrawn.

A total of 30 patients have been treated by this method; all had clinical and laboratory evidence of parenchymal liver disease. Significant signs and symptoms were:

Hematemesis	30
Melena	25
Jaundice	19
Ascites	25
Hepatomegaly	23

Splenomegaly	26
Spider angiomas	19
Liver palms	24

A liver profile consisting of a total protein, albumin, globulin, cephalin-flocculation, thymol turbidity, gamma globulin turbidity, alkaline phosphatase, total cholesterol, and icteric index was available in 23 of 30 patients. The determinations in all instances were compatible with the diagnosis of severe parenchymal liver disease.

Fifteen patients were admitted to the hospital with hematemesis and 15 patients began to hemorrhage while in the hospital under treatment for alcoholism or other intercurrent infection. It is of interest that in eight of the hospitalized cases, hematemesis began a minimum of 14 days after hospitalization, and at a time when they were considered remarkably improved with regard to their admitting illness.

1. What is the efficiency of esophageal tamponade in diagnosis?

All 30 patients had evidence of parenchymal liver disease. However, in five instances the tube diagnosis was postesophageal bleeding. All five of these patients subsequently were proved to be hemorrhaging from peptic ulcer. Three of these individuals died within 12 hours after admission to the hospital and were studied by postmortem examination. Two of these individuals were transferred to surgery, one died following gastric resection, and the other survived. The bleeding peptic ulcers comprised 16.6 per cent of the series.

When the differential diagnosis of hematemesis is discussed, three procedures are commonly advised as being of value in diagnosis. The BSP determination, if we were utilizing it to distinguish between bleeding esophageal varices and peptic ulcer, obviously would have been of no value in any of the 30 patients in this series. The second advised procedure is esophagoscopy. This is of obvious value in many patients; however, severe hemorrhagic shock and delirium may render the procedure extremely dangerous or impossible. Furthermore this presumes that the patient would always be admitted at a time when a competent endoscopist was available. The third procedure which has been advised is emergency gastrointestinal fluoroscopy. This procedure again is of obvious value in some patients. The

- objections to its use routinely are similar to the objections cited above for esophagoscopy.
2. What is the efficiency of esophageal tamponade in controlling hemorrhage?

In 20 of 25 patients with bleeding esophageal varices, there was prompt marked diminution in the rate of hemorrhage following esophageal tamponade. In five instances, there was a prompt and decided decrease in the rate of bleeding but oozing continued for varying periods of time.

3. What is the efficiency of esophageal tamponade in diminishing wastage of whole blood?

The average quantity of whole blood utilized to combat hemorrhagic shock in the individuals of this group was 2000 cc. It is important that the patient's blood volume and hematocrit be restored without the infusion of massive amounts of stored whole blood. You must remember that stored blood is not a completely physiologic substance. If a sample of our stored blood were sent to the Department of Chemistry for routine analysis, the report would be returned stating that the patient must be deceased, since the pH equalled 6.8 and the potassium concentration equalled 10 to 15 milliequivalents per liter. In addition, we know that the ammonia content of stored blood exceeds that of fresh blood, and that certain essential coagulation factors (platelets, AHG, and labile factor) diminish the longer whole blood is in storage.

4. What is the efficiency of this plan of therapy in the management of bleeding esophageal varices?

- a. Four patients died within 24 hours of the onset of hematemesis. Three of these individuals died of hemorrhagic shock and one of pulmonary edema consequent to the ill-advised rapid infusion of three units of whole blood.
- b. Four patients died 24 to 48 hours after the onset of hematemesis. In two patients, death ensued despite the fact that there was no recurrence of bleeding following the deflation of the esophageal and gastric balloons at 24 hours. One of these individuals died of intractable hemorrhagic shock and the second died of massive hemorrhage when the patient forcibly removed the deflated tube. Two patients died of intractable hemorrhagic

shock with both the gastric and the esophageal balloons inflated. There had been recurrence of bleeding with deflation of the balloons at 24 hours.

- c. Seven patients died 48 to 96 hours after the onset of hematemesis. Three of these individuals died in hepatic coma with the Sengstaken-Blakemore tube removed. There had been no recurrence of bleeding following its removal. Three of these individuals died of massive hemorrhage. In one instance, the patient forcibly removed a deflated tube precipitating the hemorrhage. The tube had been left in place because oozing which had followed deflation of the esophageal and gastric balloons at 24 hours. In two instances, the massive hemorrhage occurred 72 to 96 hours after the original hematemesis. The tube had been deflated at 24 hours without recurrence of bleeding and removed at 48 hours without recurrence of bleeding. The seventh patient died of hepatic coma. His tube was inflated at the time of death, since recurrent bleeding had followed each attempt to deflate the esophageal and gastric balloons.

Thus, in 25 cases of bleeding esophageal varices, 15 patients died within 96 hours of the onset of hematemesis. The mortality rate was 60 per cent. Of the remaining 10 cases, four died within a one month period, two of hepatic coma and two of massive hemorrhage while awaiting definitive surgery—that is, portacaval shunt. In three patients, successful portacaval shunts were performed and in three instances, the patients refused surgery and signed themselves out of the hospital, and have been lost for follow-up.

It is our belief that esophageal tamponade is a mechanical procedure which can only accomplish three objectives in the therapy of bleeding esophageal varices; aid in diagnosis, control of bleeding, and decrease in the wastage of whole blood. Esophageal tamponade has accomplished these objectives in our series.

The chief *disadvantage* of esophageal tamponade in our experience is the tendency of secretions to accumulate in the upper esophagus and posterior pharynx, when the esophageal balloon remains inflated. This has necessitated the pe-

riodic suction of the pharynx, particularly in the comatose patient.

The major *complication* of esophageal tamponade in this series was the forcible removal of the Sengstaken-Blakemore tube by the disoriented patient; this invariably results in renewed hemorrhage. This was a complication in two of our patients early in our experience with the technique. It did not occur in the last 16 patients treated. A commonly described complication is ulceration of the esophagus. Such ulcerations have been described by many authors after as little as 48 to 72 hours of esophageal tamponade. On the other hand, it has been reported that a patient has had esophageal tamponade intermittently for as long as six weeks without ulceration of the esophagus. This complication apparently is not directly related to the duration of esophageal tamponade and perhaps is more related to the nutritional status of the patient. We did not have any esophageal ulcerations in those patients in our series who came to post mortem examination. We believe that it is wise to deflate the balloons each 24 hours for a period of observation; this may prevent esophageal ulceration which seems to be common in the series reported from other institutions.

The *limitations* of esophageal tamponade are two:

First, it is not a definitive form of therapy but an emergency one. Four of our patients died of sudden massive recurrent hemorrhage; each of these individuals had responded satisfactorily to the plan of therapy. In two patients, the recurrent hemorrhage took place 72 to 96 hours following their initial hematemesis, and in two patients there was recurrent hemorrhage three and four weeks after their initial hematemesis, while they were awaiting definitive therapy.

Second, it is obvious that esophageal tamponade cannot in itself prevent hepatic coma, and any efficient program of therapy for bleeding esophageal varices must include measures which are designed to prevent or minimize the danger of hepatic coma.

This is our program of management. It has gained some measure of success but certain problems remain unsolved. One of the most difficult is the decision as to when to perform definitive surgery. The patient you have presented falls in that group. If the tube cannot be deflated without prompt recurrence of bleeding, and his gen-

eral condition permits, I would recommend operative intervention.

Dr. Grossman: I was pleased to hear your remarks about decubitus ulcers from the tube. We argued long and hard about their likelihood in this patient.

Dr. Freeark: The use of the term "ulcer" in these patients requires definition. They can occur on the sacrum, the old familiar "bedsore," because of the poor nutritional state of these patients. They may also develop a decubitus ulcer from the pressure of the balloons on the esophagogastric mucosa, and a third ulcer may arise at the external nares where the tube is drawn tightly against the nose in fixing it to the face. Lastly, there is considerable evidence that patients with cirrhosis, both before and after surgery, are predisposed to the development of gastric and duodenal ulcer. I might add that the same is true of the internist and surgeon charged with the care of these patients.

It should be obvious that Dr. Tobin has done a great deal to improve the status of these patients at Cook County Hospital. His knowledge of the medical management and preparation for surgery is greatly appreciated and it places a responsibility on the surgical department to match his enthusiasm and provide definitive treatment for these patients.

Dr. Kozoll, what should we have done for this patient and what has surgery contributed to the problem in general?

Dr. Donald D. Kozoll (Attending Surgeon): I believe that this case demands surgical exploration and I would heartily endorse an attempt at emergency portacaval shunt. Such treatment may seem heroic but the logic behind this surgery is based upon bitter experience. In a pathologic anatomical study which Dr. James Kane did in this institution on the etiology of gastrointestinal hemorrhage, esophageal varices comprised approximately 30 per cent of the fatalities which were attributed to hemorrhage. Duodenal ulcer comprised about 25 per cent and gastric ulcer 20 per cent. These figures are compatible with those of other municipal charity institutions. Obviously, private and veterans hospitals will not record comparable data, and in evaluating this problem we have to bear in mind the institution and the type of patient with which we are dealing. A slightly different approach to the seriousness of the problem is re-

flected in a survey made of patients with cirrhosis and gastrointestinal bleeding. The case fatality rate approaches 75 per cent. What happened to the survivors following their discharge from the hospital, we are not sure, but I am certain that if we had the time and facilities to follow them accurately, the fatality rate would be even higher. In short, we have a serious problem. If you make hospital rounds regularly, and face these people on the wards, you realize that you cannot do the same thing year after year. It is difficult to create much enthusiasm among our senior colleagues for the operative treatment of bleeding varices. It is certainly not highly rewarding surgery in the type of patient we encounter in this institution but we have had a few successes in our initial surgical cases and we are encouraged to continue.

Why do I feel that this patient should have emergency portacaval shunt when he bled upon the second deflation of the gastric and esophageal balloons? I learned earlier today that this man was a wine drinker and wine drinkers do not have the nutritional deficits that the usual alcoholics have. Wine drinkers are in better condition. The physician is often perplexed when he encounters a patient with cirrhosis and good nutritional status. Pointed questions often will reveal an atypical drinking pattern. I recently encountered a cirrhotic patient whose wife volunteered that the first thing this individual did each morning was to drink a glass of wine and then a glass of beer. This type of individual usually eats with his drink and does not rely upon the alcoholic spirits for all of his calories. I suspect that this patient was in relatively good condition because he was a wine drinker.

The other thing that impressed me was that he had no evidence of ascites. An ascitic patient is not the ideal candidate for any operation. If the cirrhotic does not respond to the treatment for ascites, I do not wish to operate. The presence of jaundice, either clinical or chemical, is disturbing. The level of the icteric index was not great in this patient and in view of the otherwise satisfactory liver profile, may have rendered surgery hazardous but does not contraindicate it.

If we elect to operate, what procedures are available?

The aforementioned operation of portacaval shunt in which the portal vein blood is led off directly into the inferior vena cava and bypasses

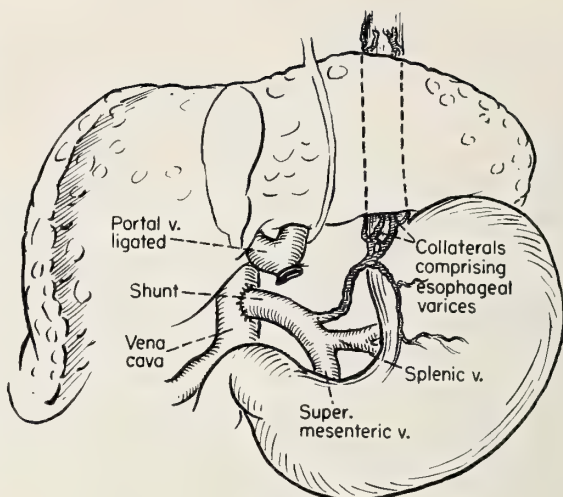


Figure 2

the liver is unquestionably the most effective procedure in preventing further hemorrhage. [Figure 2.] It is unfortunately the most trying upon the patient and his surgeon.

Some have elected to attack the problem more directly and have ligated the veins in the esophagus much as we do for hemorrhoids that are bleeding. This has been done through an abdominal or a transthoracic approach. In our experience the patients do not tolerate a prolonged thoracic procedure well and the abdominal approach may be limited when the liver is large. The most serious objection to emergency ligation of esophageal varices is that the bleeding may be stopped temporarily by ligature but the patient either re-bleeds or succumbs to some other complication before it is feasible to return him to the operating room for a definitive second procedure.

Therefore, my feeling is that the best way to control the acute bleeding episode is with a Sengstaken-Blakemore tube. If this proves successful, the patient must be evaluated for direct portal vein surgery. Before this surgery is undertaken on an elective basis, certain criteria of hepatic function should be met. I think these patients should have a serum albumin of at least 3 gm., preferably no jaundice, and have a bromsulphalein retention of less than 30 per cent. I am less concerned with the prothrombin time. We have seen few patients who have bled excessively because of prothrombin deficiency. If the prothrombin time is prolonged and they are going to respond they will do so following vitamin K injection within 72 hours.

Now just a word about portacaval shunts. This procedure was first performed by a Russian surgeon by the name of Eck. His reason for making a fistula between the portal vein and the inferior vena cava was to prove one point: That the human could survive ligation of the portal vein. He had no idea of relating it to anything else. He was a military surgeon and did this as a purely experimental study. He found that if he created the fistula first and then went back and ligated the portal vein, these animals survived. Physiologists who learned of this experiment would have been the last to have attempted a portacaval shunt in the human. These dogs, while living, following the procedure were very susceptible to protein intoxication. This is seen uncommonly in the human after the procedure. In the United States, it was the group at Presbyterian Hospital in New York under Whipple who did more to establish the feasibility of this procedure than any others.

The only practical method is to anastomose the portal vein to the vena cava in an end-to-side fashion. The side-to-side procedure is better tolerated but is less reliable in its lowering of portal pressure. The end-to-side procedure is much to be preferred because it is faster and more effective. Those of us who are willing to aggravate their own varicosities by standing for eight hours have improved our technique so that the operation now takes four to five hours. Instead of going through the chest, a bilateral subcostal incision is extended well into the flank. All of these things have improved the outcome for these patients.

Dr. Freeark: This patient was operated upon through a bilateral subcostal incision with a midline "T" extension. Upon opening the abdomen, there was no ascites but markedly dilated veins were apparent in the greater omentum. The initial pressure reading in the portal vein tributaries was 480 mm. of water. We accept 200 mm. as the upper limits of normal. The liver was nodular, mottled, and markedly enlarged. The spleen was two to three times normal size. An end-to-side portacaval shunt was performed and the Sengstaken tube left in place. Following the shunt, the pressure was reduced to 300 mm. and there was visible collapse of the dilated portal collaterals; this was more impressive than the changes in the pressure reading. The pressure was not reduced to normal despite a shunt

of approximately 2 cm. in diameter. The patient tolerated the procedure well but did poorly in the sense that we were unable to deflate the esophageal balloon for 10 days. Each time this was attempted further bleeding occurred but eventually we were able to remove the tube and he appears to have successfully withstood the ordeal.

An interesting point in management deserves emphasis. With a rising icteric index, lethargy, and some fetor hepaticus in the immediate post-operative period, cortisone was given intramuscularly with prompt improvement in his clinical appearance and laboratory findings. Dr. Tobin has advised us to use this therapy in other cases. The effect is dramatic and it would appear to have reversed an impending hepatic coma in this patient.

Dr. Grossman: Do you recommend the use of crude liver extract and massive vitamin therapy in these cases?

Dr. Tobin: I am not impressed with the benefits of crude liver. There seems to be no evidence which supports its use, but this also is true of the use of cortisone. Many people say that it is not effective in hepatic coma, particularly in the presence of alcoholic cirrhosis. However, we feel it is of benefit but we do not know why.

Dr. R. C. Giles: (Surgical Attending Staff) Is slow bleeding likely to result from esophageal varices and is the string test of any practical value in locating the point of hemorrhage?

Dr. Tobin: If you have a patient who is bleeding slowly and who cannot be fluoroscoped, or if the fluoroscopy was negative, and he continued to bleed, you may wish to know the level of bleeding in order to identify a place of surgical exploration. There it would have some value.

Dr. Freeark: Slow bleeding is not likely to be on the basis of esophageal varices.

Dr. Tobin: In the medical wards we have patients who are cirrhotic who have benzidine positive material in their stool; they are not overtly bleeding, but we are invariably puzzled as to the source.

Question: In animals, the use of an end-to-side portacaval shunt prevents subsequent liver regeneration. Is this a consideration in the human?

Dr. Kozoll: Apparently not. There are many paradoxes about surgery in this situation. We deliberately create a shunt, knowing that there

are already existing venovenous shunts between the systemic and portal circulation. The natural shunts are inadequate, however, and the prime objective of surgery is to reduce the portal venous pressure. The shunt does not improve liver function except in its protection against the devastating effect of further hemorrhage. How much harm it does to the liver is difficult to assess since anesthetic agents alone are hepatotoxins.

Dr. John E. O'Donoghue (Attending Surgeon) : It gives me a great deal of satisfaction to observe in this institution such concerted effort towards the treatment of this condition. I think crystallization of this work will inform us in a way that we have not been informed in the past about liver function and hepatic coma. Any insight into the problems these people present will be a major contribution. I have enjoyed this discussion very much.

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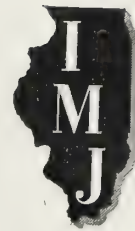
Effects of malpractice litigation

Physicians are particularly vulnerable to suits for malpractice, and most of them carry \$50,000 or more insurance against them. The cost of this insurance is outrageous and must be passed along to the patients by increasing professional fees. Because of unfavorable criticism in the magazines and newspapers, the public's attitude is not one of the confidence and trust that prevailed in the past. They demand perfect results, and in a hurry. Since the introduction of the wonder drugs, the physician is expected to cure you in 48 hours. If he does not, you get another physician. The physician is beginning to regard each patient as a potential litigant, which does not augur well for a good doctor-patient relationship. In desperate cases the physician may fail to apply desperate measures which may be lifesaving because of the possibility of a suit for malpractice.

Anybody can sue anybody for anything. He

cannot always win, but he can cause unfavorable publicity, loss of time, worry, and loss of money for the person who is sued. There should be a provision in the law that the physician should be recompensed by the plaintiff if the jury should decide that there was no proper basis for a suit against the physician for malpractice.

In the old days when the doctor-patient relationship was cordial, friendly, and close, both the physician and the patient were better off. We have forgotten that the body itself is a complicated and efficient chemical laboratory equipped to fight germs and to heal itself—that the tendency of the body is to return to health, so that about 80 per cent of human maladies will recover with rest and time. The physician's duty was to provide solace and comfort and hope while nature was doing a pretty good job. I wonder how much better off we all are than in the despised "horse and buggy days." *James A. Gannon, M.D. Doctors and Lawyers, M. Ann. District of Columbia June 1959.*



Treatment of carcinoma of the colon and rectum

The outlook in cancer of the colon and rectum is much better than in most other forms of internal cancer if the established methods of treatment are used.

In the absence of distant metastases, beyond the possibility of removal of all tumor in one piece, we can anticipate a cure rate of 60 per cent or more in the colon and of over 50 per cent in the rectum which lies below the pelvic floor. This means that about three-fourths of those presenting themselves with cancer of the colon or rectum will have this cure rate.

The most important step toward cure is to think of the disease. Delay in diagnosis is lethal. In this type of cancer, spread through the blood stream usually is late. Spread by direct extension is slow. Lymph node metastases are present in at least 60 per cent of those operated for cure and the longer the delay, the more extensive the spread. When the tumor has broken through the serosa of the bowel to reach the free peritoneal cavity, the prognosis is worse since peritoneal implants tend to grow in the omentum and ovary. Those who require a decompressing colostomy because of obstruction by the tumor have less than one-half the usual chance of cure, even when there are no obvious metastases.

Age is no contraindication to surgical treat-

ment in cancer of the bowel. The over-all operative mortality in most groups usually is 2.5 to 4 per cent and in those over 70, it is no higher than for elective surgery.

The basic principles of surgical treatment have been well established for decades. They include gentle handling of the tumor, walling off the wound with lap pads to prevent implantation, avoidance of intraluminal spread of tumor by clamping or tying the bowel above and below the lesion, the single use of sponges which may have been near the tumor, and wide excision of the tumor.

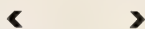
The use of chemotherapeutic agents still is in the experimental stage and both George Moore and Warren Cole have stated within the past year that cancer suppressants should be used only in a well controlled experimental environment.

Re-establishment of continuity of the bowel usually is possible in lesions more than 7 to 12 cm. above the mucocutaneous junction. Low anastomosis and pull through operations have their champions and, in the hands of experts, good results are possible with either method.

The most important step in the cure of cancer of the colon and rectum is early diagnosis and treatment. The diagnostic steps — careful history, suspicion of the likelihood of the presence of cancer, rectal examination, proctoscopic examination, and colon fluoroscopy are all easily

performed. If they are used to their best degree, we should expect a better cure rate.

R. K. Gilchrist, M.D.



Medical management and prevention of renal calculi

Many attempts have been made to dissolve kidney stones. None has proved to be a practical solution of the problem. Good results have occurred in exceptional cases in which the renal calculi developed in association with a hyperparathyroid tumor. As a rule the etiological agent is not a single, simple, and easily correctible entity.

New methods of prevention are presented every few years. In some instances procedures are well organized and based on sound judgment. Clinical application, however, has not been encouraging. The most popular plans include the use of hyaluronidase; aspirin and related salicylates; and aluminum gels.

The good effect of hyaluronidase is based on a correlation between a high level of protective colloid and the surface tension of the urine. The proponents of this method admit that the amount of hyaluronidase has to be determined carefully in each patient in order to avoid the reverse effect in which stones are formed. Many urologists now believe that hyaluronidase has no effect upon stone formation.

The value of aspirin and related salicylates is based on the theory that calcium phosphate is more soluble in the presence of glucuronosides. Salicylic acid increases the excretion of the latter and keeps the salt in solution. Studies now show that glucuronosides do not increase the solubility of calcium phosphate.

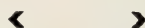
Aluminum gels form an insoluble compound of the phosphates in the intestine and reduce the amount absorbed, which in turn lessens the amount available for excretion. The method has not received extensive clinical verification and seldom is recommended.

Good medical management requires a full urological investigation of every case of renal calculi, keeping the following points in mind:

1. Obstruction must be eliminated because it produces stagnation.
2. Infection must be treated.

3. The fluid intake should be adequate enough to insure an output of 2,000 to 3,000 cc. of urine daily.
4. A balanced diet is recommended for all patients.
5. Early ambulation is desired. Bedridden patients should be turned frequently and given active muscle exercises whenever possible.
6. All suprapubic tubes, urethral catheters, or pyelotomy tubes should be irrigated with Suby's Solution "G" to delay the deposition of urinary salts on these foreign bodies. These tubes should be removed as soon as they are no longer needed.

Roland R. Cross, Jr., M.D.



Recurrent sciatic pain following laminectomy

Satisfactory results usually follow the operation to relieve lower back and neuritic pain due to ruptured spinal intervertebral disk. The affected nerve root is decompressed by removal of the displaced nuclear material.

The failures have been traced to various causes. According to Adams and Inman¹ a fragment of nuclear material may remain wedged in the intervertebral foramen and re-exploration is needed. Sciatic pain may persist when the nerve root is compressed by the adjacent bone if the facet was fractured at the time of surgery. In others, the nerve is compressed when the foramen is narrowed as a result of collapse of the intervertebral space.

Adhesions about the nerve root, intradurally or extradurally, seldom are considered when a recurrence takes place, yet they are easily relieved by stretching the sciatic nerve. It is conceivable that this maneuver was responsible for some of the sciatica cures long before the intervertebral disk was considered as the source of pain.

Adams and Inman mention a 37 year old housewife who failed to obtain relief of severe pain in the left leg following lumbar laminectomy and posterior spinal fusion. She was free of pain in the recumbent position but complained bitterly when sitting or standing. Reoperation disclosed that the root was compressed by the bone graft posteriorly and by a small piece of extruded nuclear material lying anteriorly be-

neath the nerve root in the intervertebral foramen.

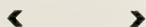
Pain was completely relieved for 10 weeks postoperatively, when it returned for a second time. A dural defect was noted and repaired at a third operation. Pain disappeared for two and a half months only to return in the same location. She was comfortable in bed but not when up and about.

They decided to stretch the sciatic nerve, hoping to increase the range of pain-free movements of the leg. This was done under anesthesia by forcible straight leg raising, accompanied by strong dorsiflexion of the foot. The woman was relieved completely after three manipulations and has carried on a normal active life since.

Forty additional patients were treated in a similar way, with good results in 21. All but nine had been re-operated previously. Two of the nine were relieved of pain and spared the need of surgery. The seven remaining patients were operated and found to have nerve compression by a recurrent protrusion of the disk or by the adjacent osseous tissue. In these seven cases, manipulation and presumed stretching of the nerve root aggravated symptoms.

Adams and Inman concluded that if the nerve root is already compressed, pain will increase when the nerve is stretched over a bulging disk or an adjacent bone. The procedure is of value only when the nerve root is involved by adhesions.

¹Adams, John E., and Inman, Verne T.: Stretching of the Sciatic Nerve, *California Med.* 91:24 (July) 1959.



Emergency service manual

A quick reference manual is being sent by the Illinois State Medical Society to all general hospitals in Illinois for use by physicians confronted with emergency medical service problems.

The purpose of the manual is "to present in concise and thorough fashion basic principles in the management of acutely ill and injured persons," according to Dr. John H. Schneewind, chief of emergency service, University of Illinois Hospital.

Additional copies are available at \$2.50 each, postage prepaid, from the Student Supply Store, University of Illinois, 808 South Wood Street, Chicago 12.

A new fee system

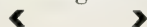
Many California physicians have taken the lead in establishing and publishing a set fee schedule. The trend is a departure from the recommendations of the AMA which suggest charges "commensurate with services rendered and the patient's ability to pay."

It is no secret that a number of influences, including insurance companies, are at work to discard the old system. Many of these groups are disbursing benefits at the rate of \$4 billion a year. Their plans usually list the various surgical and medical services covered, and our sliding fee schedule is their bottleneck.

The change is an outgrowth of an exhaustive study by the California Medical Society. It has come up with payment plans rather than a standard charge for each of the 2,000 medical services rendered by physicians and surgeons. In one, charges are calculated in multiples of the fee for an office visit. In this plan a procedure is given a value of so many units, such as 35 for an appendectomy or 40 for a cholecystectomy. The cost of the operation is calculated by multiplying the unit value by the amount charged for an office visit. The fee for an appendectomy is \$175 when the customary office charge is \$5. Those who charge \$10 for an office visit, receive \$350 for an appendectomy.

All bargaining with third party groups centers about the price of a unit. In this way, arguments about minute details are avoided.

The issue of the fixed fee is getting closer and closer to home. Other states are studying the problem — including Michigan, Iowa, and Kansas. Many argue that a standard fee is impossible because not all physicians are equally competent. This may be the compromise the medical profession must agree on if it is to remain free and in a position to bargain with groups.



New AMA publications provided

The AMA announced that dues paying members hereafter will receive the *Journal of the AMA*, *Today's Health*, and one of 10 specialty publications. The specialty group from which a selection may be made consists of the *AMA Archives of Internal Medicine*, *Dermatology*, *Neurology*, *General Psychiatry*, *Pathology*, *Surgery*, *Otolaryngology*, *Ophthalmology*, *Industrial Health*, and *Diseases of Children*.

N. U. Medical School centennial

On Tuesday, September 29, Northwestern University Medical School will hold a day-long celebration in honor of the 100th anniversary of its founding. The ceremonies will include the Founders Day Convocation in the morning, a Colloquium of Medical Sciences in the afternoon, and a Centennial Awards Dinner in the evening.

The Founders Day Convocation, traditionally is held at this time every year to mark the beginning of the academic year and to commemorate the six men who in 1895 broke away from the faculty of Rush Medical College to form what was to become the medical school of Northwestern University.

During this Centennial Year Founders Day Convocation, to be held at 10:00 a.m. in Thorne Hall on the Chicago campus, honorary doctor of science degrees will be presented to eight scientists whom Northwestern University has designated as men who have made outstanding contributions in their various fields. Dr. J. Roscoe Miller, president of Northwestern University, will confer the degrees.

Dr. Conrad Elvehjem, world-famous biochemist, president of the University of Wisconsin, and one of the honorary degree recipients, will deliver the Founders Day address on "Science and Medicine."

Other honorary degree recipients, each of whom will deliver a paper at the Colloquium during the afternoon session at Thorne hall, are:

Dr. Charles H. Best, head of the department of physiology, University of Toronto—"Unfinished Researches"

Dr. Irvine McQuarrie, director of research, Bruce Lyon Memorial Research Laboratory of the Children's Hospital of East Bay, Oakland, California — "In Pursuit of Convulsive Mechanisms"

Dr. Joe Vincent Meigs, clinical professor of gynecology, Harvard University — "Cancer of the Cervix"

Dr. I. S. Ravdin, chairman of the department of surgery, University of Pennsylvania — "The Doctor's Dilemma"

Dr. William S. Tillett, professor of medicine, New York University College of Medicine — "The Changing Pattern of Disease"

Dr. Shields Warren, professor of pathology,

Harvard University — "Man's Adaptation of the Atomic World"

Dr. Horace W. Magoun, professor of anatomy, Medical Center of the University of California at Los Angeles — "Concepts of Brain Function in Northwestern's Century." Dr. Magoun's address will be given at the Centennial Awards Dinner.

At the Centennial Awards Dinner, to be held at the Furniture Club of Chicago, merit awards will be presented to 20 alumni of the medical school who have attained high academic rank at other medical schools and who have brought honor to their Alma Mater.

The following alumni will be honored:

C. Knight Aldrich, M.D., (1940) chairman of the department of psychiatry, University of Chicago School of Medicine

Robert A. Aldrich, M.D., (1944) professor and executive officer of the department of pediatrics, University of Washington School of Medicine

Franklin L. Ashley, M.D., (1941) associate professor of surgery, University of California Medical Center at Los Angeles

John R. Brobeck, Ph.D., (1939) professor of physiology, University of Pennsylvania School of Medicine

Sam L. Clark, M.S. (1924), professor and head of the department of anatomy, Vanderbilt University School of Medicine

Robert P. Knight, M.D. (1933), clinical professor of psychiatry, Yale University, and medical director of the Austen Riggs Center.

Joseph J. McDonald, M.D., (1940), professor of surgery and medical dean, American University, Beirut, Lebanon

Chester B. McVay, M.D. (1939), Ph.D. (1940), clinical professor and chairman of the department of surgery, University of South Dakota School of Medicine

Walter J. Nungester, M.D. (1934), professor and chairman of the department of bacteriology, University of Michigan

John I. Nurnberger, M.D. (1943), professor and chairman of the department of psychiatry, Indiana University School of Medicine

James L. Orbison, M.D. (1944), professor and chairman of the department of pathology, University of Rochester School of Medicine and Dentistry

Ben M. Peckham, M.D. (1942), Ph.D.

(1949), professor and chairman of the department of obstetrics and gynecology, University of Wisconsin Medical School

Charles A. Poindexter, M.D. (1930), professor of medicine and physician-in-chief of the cardiac division, New York University Postgraduate Medical School

George N. Raines, M.D. (1931), professor and chairman of the department of psychiatry, Georgetown University School of Medicine

Rulon W. Rawson, M.D. (1938), professor of medicine and head of the department of clinical investigation, Sloan-Kettering Institute for Cancer Research, Cornell University Medical College

Bronson S. Ray, M.D. (1929), professor of surgery, Cornell University Medical College

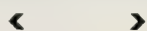
Duncan E. Reid, M.D. (1932) professor of obstetrics, Harvard University Medical School

Randall G. Sprague, M.D. (1935), professor of medicine, Mayo Foundation, University of Minnesota

Thomas H. Sternberg, M.D. (1934), professor of dermatology and head of the division of postgraduate medical education, University of California School of Medicine, Los Angeles

Frank E. Stinchfield, M.D. (1935), professor and chairman of the department of orthopedic surgery, Columbia University College of Physicians and Surgeons.

In addition, service awards will be presented to 11 emeriti department chairman of Northwestern University Medical School to honor their loyalty and contributions to the school. They are: Leslie B. Arey, anatomy; Howard C. Ballenger, otolaryngology; James T. Case, radiology; Alexander A. Day, bacteriology; Chester J. Farmer, chemistry; Edward L. Jenkinson, radiology; Philip Lewin, bone and joint surgery; Paul B. Magnuson, bone and joint surgery; Lewis J. Pollock, nervous and mental diseases; James P. Simonds, pathology; and Arthur W. Stillians, dermatology.



Placement service

In recent years we have rarely reported the accomplishments of our Physicians Placement Service until the annual report for the House of Delegates. However, so far as filling openings for general practitioners is concerned, the three months period beginning when the Handbook for the House of Delegates went to press in April

has broken a record. During this period the following towns have obtained physicians as a result of assistance from our Placement Service:

Adams County, Camp Point, population 1,200; Dr. Wayne Kisthard; native born.

Clinton County, Germantown, population 850; Dr. Jose Sosa, born in Cuba. (Sears Roebuck Foundation assisted in plans for new building now occupied by Dr. Sosa.)

Cumberland County, Toledo, population 905; Dr. Leland McNeill. Dr. McNeill was an Illinois Agricultural Association-Illinois State Medical Society loan student.

Fayette County, St. Elmo, population 1,716; Dr. Anthony Ziegler; native born.

Franklin County, Royalton, population 1,506; Dr. Ray Roy; born in Poland.

Hancock County, Nauvoo, population 1,250; Dr. George Gundrum; foreign born.

Lake County, Grays Lake, population 2,704; Dr. Ralph Burnett; native born.

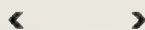
Marion County, Kinmundy, population 1,000; Dr. Lelan Stallings; native born. (Sears Roebuck Foundation assisted in plans for new buildings now occupied by Dr. Stallings.)

Marshall County, Lacon, population 2,100; Dr. Merle Swearingen; native born.

McLean County, Downs, population 500; Dr. Emmeld Martens; German born.

St. Clair County, East St. Louis, population 82,000; Dr. Dwight Anderson, native born. (Opening for an associate for Dr. Louis Kadas.)

We are especially pleased with this line-up since it includes some of the smallest towns listed with our Physicians Placement Service as needing physicians. In general, these openings are the most difficult to fill. Although four of the physicians are foreign born, these rural communities appear to be pleased that they will now have the services of a resident physician.



Nutrition conference slated for Macomb, October 3

The annual Nutrition Conference sponsored by the Committee on Nutrition of the Illinois State Medical Society and the Illinois Nutrition Committee will be held in the Little Theater, Western Illinois University, Macomb, October 3.

The theme will be "Nutrition is Our Daily

Orbit." The preliminary program follows:

8:45 — Registration (Adults \$1.50, Students free)

Coffee — Social Room — 1st floor

9:45 — Morning Session

Presiding:

Dorothy Lucke, Ed.D., Chairman,
Illinois Nutrition Committee

Greetings:

(1) A. L. Knoblauch, Ed.D., President, Western Illinois University

(2) Joseph T. O'Neill, M.D., President, Illinois State Medical Society

(3) William P. Standard, M.D., President, McDonough County Medical Society

"Motivation for Good Food Habits"

R. Bruce Kirk, Ph.D., Director,
Continuing Education Services,
American Dietetic Association

"The Physician's Responsibility for the Nutrition of His Patients"

Robert Jackson, M.D., Professor and Head, Department of Pediatrics, Medical School, University of Missouri, Columbia

12:45 — Luncheon — Student Center

2:00 — Afternoon Session

Presiding:

Paul A. Dailey, M.D., Chairman,
Committee on Nutrition, Illinois
State Medical Society

"Progress in Nutrition"

Margaret A. Ohlson, Ph.D., Director, Department of Nutrition, University Hospital, State University of Iowa, Iowa City

"Teamwork for Better Nutrition"—

Panel

Moderator:

R. Bruce Kirk, Ph.D.

Participants:

Robert Jackson, M.D.

Margaret Ohlson, Ph.D.

D. K. Grissom, Ph.D., Associate Professor, Department of Health Education, Southern

Illinois University, Carbondale

Mrs. M. A. Tarulli, Director, Nu-

trition Infant Welfare Society of Chicago

C. Edith Weir, Ph.D., Chief, Division of Home Economics, American Meat Institute Foundation, Chicago

4:30 p.m. — Adjournment

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Editorials from other journals

Nickels, dimes, and dollars

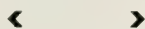
Author Marion K. Sanders, writing in the December 1958 issue of Harper's Magazine, does a masterful job of surveying nickle-dime-and-dollar fund solicitations based on an expanding variety of ailments and afflictions. We commend her article to GP readers and wish to add a few comments of our own.

As the article points out, no one seems to know how many different agencies are passing different hats. But last spring, the Savannah (Ga.) Morning Herald managed to list 19 organizations collecting for the blind, seven for disabled veterans, six for crippled people, five for cancer, four for mental illness, two each for muscular dystrophy, polio, leprosy, brain injuries, and alcoholism, and one each for heart disease, retarded children, cerebral palsy, deafness, tuberculosis, multiple sclerosis, arthritis, myasthenia gravis, nephrosis, facial disfigurement, tropical diseases, diabetes, epilepsy, allergic diseases, hemophilia, and paraplegia. That adds up to 67 solicitations revolving around the human body. The article tells about one fund worker who had to wait outside in his car until another fund worker finished making an impassioned pitch for pennies.

Fund raising is strictly big business. Consider the old National Foundation for Infantile Paralysis, now known simply as the National Foundation. This organization, with the help of Franklin Delano Roosevelt, raised \$2 million in 1941, \$65 million in 1954. Not every agency has the endorsement of a president or a past president but even without this kind of bonus, many of them do very well. Comedian Jerry Lewis has certainly aided muscular dystrophy drives.

These comments are in no way meant as a reflection on either the spirit or the intent of health campaigns. We instead wonder when, if

ever, well-meaning people will stop coming up with new and nominally worthy causes. We expect any day to be hit by the National Charley-Horse Foundation or the American Society for Ingrown Toenails. *GP March 1959.*



Council meeting minutes

REORGANIZATION MEETING

The reorganization meeting of the Council was held at the Hotel Sherman, Chicago, on Sunday, July 26, with the following present: Hesseltine, Hamm, Burdick, Camp, Clark, Redmond, W. E. Adams, Portes, Piszczek, Blair, Endres, Reisch, DuPuy, Goodyear, English, Montgomery, Fullerton, Klein, Oldfield, Compton (East St. Louis), Bornemeier, Turner, Van Dellen, Ruth Church, Mr. Neal, Mr. Oblinger, Mr. Mirt, and Frances Zimmer.

MOTION: (Piszczek-Portes) that the minutes of the Council meetings held during the annual meeting be approved as mailed to members. Motion carried.

REPORTS OF OFFICERS

Dr. O'Neill, as president, submitted a written report since he was unable to attend the Council meeting. "It is with extreme regret that I make this report in absentia, but I found this the most opportune time to have a cataract removed. By doing this I hope to be able to see our future problems with a more competent eye."

Dr. O'Neill reported that he had attended the AMA meeting in Atlantic City; the meeting of the Committee on Industrial Health dealing with impartial medical testimony; had acted as one of the judges for the Blue Shield essay contest for senior high school students; met with representatives of Blue Shield and management and labor; and also had worked with the Ad Hoc Committee to review the Rogers, Slade & Hill report.

Dr. Hesseltine reported as president elect. Representatives of the United Automobile Workers and representatives of General Motors Corporation had requested a meeting with Illinois Medical Service and representatives of the ISMS. The president and president elect were asked to attend on July 24, 1959. The discussion concerned medical and surgical payments for employees under health programs provided by Gen-

eral Motors. Opinions were expressed assuring labor and management that the physicians of Illinois are concerned about the principle of free choice by the patient and good medical care for all people. The men were assured of the position of ISMS on indemnity rather than service type coverage. These individuals were informed why medical care is more expensive now than in the past. Never before has the public profited so much by its better health. People are living longer and better. Medical and surgical costs of the future will be greater as determined by current trends, and the rewards will be reaped in better health and longer life.

Dr. Hesseltine also attended the meeting of the Ad Hoc Committee to study and make recommendations on the Rogers, Slade & Hill report.

Dr. Montgomery reported as chairman of the Council. He announced the personnel of the various committees for the 1959-1960 fiscal year. The Secretary's Newsletter carried a request that all county society officers, and all other interested parties send in suggestions for committee personnel and appointments. Only about eight suggestions were received; therefore, routine appointments had to proceed without additional assistance and suggestions.

The entire personnel list will be mimeographed and mailed to members of the Council as soon as possible. Notices also will be sent to all committees.

ROGERS, SLADE & HILL SURVEY

Dr. Montgomery stated that the survey made by Rogers, Slade & Hill had been printed, and was ready for distribution to all members of the 1959 House (all delegates and also all alternate delegates, members of the Council, past presidents, etc.). The material to be submitted by the Ad Hoc Committee (Hamilton, O'Neill, and Hesseltine) will not be presented to the Council until the August 23rd meeting due to the fact that Dr. O'Neill is in the hospital, and Dr. Hamilton was unable to be present because of the death of his sister. As soon as the Council has had an opportunity to express its opinion in regard to the report and also the survey, and these opinions can be mimeographed to accompany the survey, the mailing will proceed.

Dr. Camp presented a letter from Dr. Hopkins expressing his appreciation for co-operation, and

offering his services in any capacity the Council may desire so long as no conflict in status might occur between the ISMS and the AMA, where Doctor Hopkins is now serving as a member of the Board of Trustees.

Dr. Camp also presented a letter from Dr. F. J. L. Blasingame thanking the state society for its co-operation in connection with the hearings conducted in Washington, D. C., by the House Ways and Means Committee on H.R. 4700, 86th Congress. His special thanks were extended to Dr. E. A. Piszczek who appeared before the committee as a representative of ISMS.

Dr. Camp reported that a letter had been received from the National Society for Medical Research requesting financial support for its 1959 program.

This letter (by Council action) was referred to the Finance Committee and the Executive Committee for recommendations to the Council at its next meeting.

MEDICAL SERVICE AND PUBLIC RELATIONS

Mr. Oblinger presented a detailed report of the successful activity of ISMS during the 71st General Assembly in Springfield. He listed the bills in which the Society was interested, and outlined the various successful fields in which he, Mr. Neal, and Mr. Scott had participated during recent months. The material was mimeographed and distributed to those in attendance. Mr. Oblinger, in closing his report, acknowledged the invaluable assistance of Dr. Hopkins and other members of the committee, members of the ISMS who appeared before committees, and especially the Councilors who had co-operated with and assisted him throughout the session.

Dr. Piszczek told of his trip to Washington (Dr. Sullivan and Dr. Scanlon) and the manner in which the AMA assisted them. They met both Representatives O'Brien and Noah Mason (members of the Ways & Means Committee) and an excellent relationship developed. H.R. 4700 will not be pushed further this year, but we may be assured that if the problem of care for those over 65 is not solved to the satisfaction of the adult population, that this type of legislation will be reintroduced at the national level. The AMA was pleased with the statement made by Illinois, and Mr. Neal's assistance was appreciated.

COMMITTEE ON AGING

Dr. E. W. Cannady reported as chairman. On

May 19, representatives of the Illinois Hospital Association, Illinois Nursing Home Association, Illinois State Dental Society, and the ISMS met and formed the "Illinois Joint Council to Improve the Health Care of the Aged."

The Illinois committee has been represented at (1) First National Conference of the Joint Council to Improve the Health Care of the Aged held in Washington, D. C., on June 12 and 13; (2) Leadership Training Institute for the White House Conference on Aging held at Ann Arbor, Michigan, June 24-26; (3) a pre-conference meeting in Kansas City on July 24 to discuss plans for a Regional Conference on Aging to be co-sponsored by the AMA and the participating states (Illinois, Kansas, Missouri, Nebraska, and Oklahoma). The conference will be held in Kansas City on November 16-17.

Blue Cross-Blue Shield Plans in Illinois were informed of the actions of the ISMS House of Delegates regarding the recommendation that Blue Cross and Blue Shield Plans in Illinois attempt to prepare an indemnity program to be made available on an individual basis to people 65 and over.

In a recent communication, Mr. Walter Oblinger stated he had recommended to Senator Paul W. Broyles that one of the five public members of the Governor's Commission on Aging be a physician. Senator Broyles replied that four of the public members wish to serve again and that it is his intention to recommend a "Doctor Franke" from the University of Illinois to fill the fifth place. Dr. Cannady stated that he understood that Dr. Franke was not an M.D., and Senator Broyles replied "If the ISMS would like to have a physician, we would like to invite whomever they might designate to attend all of our meetings. This person could serve in an advisory capacity. The only thing he would be deprived of would be the right to vote on official matters."

It is the opinion of the chairman that a physician should be an active member of the commission, and that the Council should so advise Senator Broyles and Governor Stratton. However, if it is not possible to have a physician appointed at this time, the chairman would like to recommend that the ISMS accept the invitation of Senator Broyles to have a physician represent the ISMS at meetings of the Commission. If it

is the wish of the Council, the Committee on Aging will accept the responsibility of having a representative attend these meetings.

The Committee on Aging will sponsor an all day conference on problems of aging to be held in Springfield on Sunday, September 27th. A tentative program was outlined by Dr. Cannady. The morning program will consist of a symposium on the health care of the aged; a speaker will address the group at luncheon; and the afternoon portion of the program will deal with the problems of financing medical care for people over 65.

The committee wants Council consideration of:

1. Who shall be invited to the conference.
2. The expenses of the meeting and the luncheon.
3. Special guests — the committee would like to invite a limited number of people who have been helpful in the work of the committee.

MOTION: (Endres-Clark) that the Council concur in the recommendations of the committee that the Society should be represented on the Governor's Commission, and that a letter should be sent to Senator Broyles and also to Governor Stratton. It is the suggestion of the Council that Dr. Cannady represent the ISMS. Motion carried.

It was suggested that the program be timed carefully and that not too heavy a schedule be provided.

MOTION: (English-Portes) that the committee be allowed to use its own discretion relative to invited guests. Motion carried.

(Dr. English suggested that the two United States Senators and also Representatives Noah Mason and Thomas O'Brien be included on the guest list).

Dr. George Turner suggested that the Secretaries' Conference be combined with the Conference on Aging, and that the county society secretaries be included in the list of people to be invited to the meeting. Dr. English suggested that the expenses of these two representatives from each county society be assumed by the ISMS — (the county chairman of the committee on aging, and the county medical society secretary) — a per diem and 10c a mile plus the luncheon. There should be at least two representatives from each county in attendance.

MOTION: (Portes-Endres) that the Secre-

taries' Conference be combined with this meeting of the Committee on Aging. Motion carried.

MOTION: (English-Clark) that the expenses of two representatives from each county medical society (to include a modest per diem and travel) be paid by the society. The two representatives to be invited are (1) a member of the county society committee on aging, and (2) the secretary of the county society or his representative. Motion carried.

All delegates and alternate delegates to the AMA should also be invited, and all members of the Council should plan to attend.

CONSTITUTION AND BYLAWS

The report of the Committee on Constitution and Bylaws was presented by Dr. Bornemeier. The House of Delegates suggested that the division of the Committee on Medical Service and Public Relations into two distinct committees be dependent upon the management survey; the same opinion was expressed relative to a presiding officer and his assistant for meetings of the House. Dr. Bornemeier had one recommendation — that legal counsel review all changes before they are presented to the House in order to avoid any difficulty.

MOTION: (Endres-Fullerton) that the Council concur in this recommendation. Motion carried.

The reprinting of the Constitution and Bylaws can be discussed at a later meeting, since so many changes were made by the House in May, and additional changes are contemplated for presentation to the next session of the House. The cost of reprinting the constitution as it appears at this time, plus the cost of a loose-leaf publication should be obtained. If the loose-leaf type publication can be supplied county society secretaries, etc., the constitution could be kept up to date at a minimum cost.

WORLD CONFERENCE ON MEDICAL EDUCATION

Dr. Bornemeier also reported that as chairman of the local committee on arrangements for the World Conference on Medical Education, some financial assistance would be needed. The Chicago Medical Society has agreed to furnish "up to \$500.00" and the local committee would request that the state society do likewise.

MOTION: (English-Reisch) that the Council agree to provide "up to \$500.00" for the local committee on arrangements for the World Con-

ference on Medical Education. Motion carried.

COMMITTEE ON INDUSTRIAL HEALTH

Dr. Bennett as chairman of the Committee on Industrial Health, submitted a written report that had been mimeographed and mailed to all members of the Council.

MOTION: (English-Piszczeck) that the fall dinner meeting for those panel members (Impartial Medical Testimony) not yet indoctrinated (about 70) be authorized. Motion carried.

The action relative to the printing of the handbooks is to be deferred until the August meeting with the thought in mind that Dr. Bennett as chairman will be able to present approximate costs and additional information.

CORNELL UNIVERSITY RESEARCH PROGRAM

Dr. Van Dellen, chairman of the Committee on Traffic Safety, presented the request of the Supervisor of Field Operations, Automotive Injury Research of Cornell University, that the Society approve a study in Illinois. Similar studies have been made in Arizona, California, Colorado, Connecticut, Georgia, Maryland, New York, North Carolina, Ohio, Pennsylvania, Texas, Vermont, and Virginia. Co-operation and approval must be secured from the Division of Traffic Safety, Department of Public Safety of Illinois, State Department of Public Health, Illinois State Police, and the ISMS. There is no cost involved in the survey so far as the Society is concerned. The report deals with such subjects as "the big car vs. the small car", safety belts, dash board injuries, bumper fractures, etc. There will be about four sampling areas selected.

MOTION: (Clark-Piszczeck) that approval be given. Motion carried.

DEPARTMENT OF PUBLIC HEALTH

In the absence of Dr. Roland R. Cross, director, the following report was presented by Dr. Ruth Church, deputy director of the State Department of Public Health:

The Department would appreciate the thinking and assistance of the ISMS in developing a cancer program for the State of Illinois. The Department has received funds from the USPHS for cancer services and in the past, clinics in 29 hospitals have been subsidized. A review of the clinics was made over the past two years, and the financial support from the Department has been withdrawn from most of them. Since these are federal moneys given as grants-in-aid to the

state, the Department has to comply with certain regulations set up by the USPHS.

The State Legislature appropriated \$200 thousand for the next biennium for a cancer program. The wording of the bill is: "For the purpose of preventing, arresting, and minimizing the disabling and fatal effects of cancer, the department is authorized to assist local health departments in detecting cancer in the early stages; in stimulating prompt treatment when needed, and in providing home visiting nursing services and similar services aimed at the prevention and control of cancer."

The Department would like to stimulate the development of programs in local full time health departments that will co-operate with the existing medical facilities in such programs. The Department has an Advisory Committee composed of seven members of the state society appointed by the Governor, but the Department is now requesting a committee from the ISMS to work with this Advisory Committee in forming policies the department can follow in developing a cancer program to make sure that the tax funds appropriated to the Department for the program can be utilized to the best advantage. The Department will defray the expenses of travel of committee members for any meetings that may be called.

MOTION: (Piszczeck-Fullerton) that this request be referred to our Society Committee on Cancer Control for consideration and co-operation. Motion carried.

EMERGENCY SERVICE MANUAL

Dr. English discussed the Emergency Service Manual edited and developed by the University of Illinois College of Medicine (Dr. John H. Schneewind, Chief of Emergency Service). The cost of the manual is \$2.50 and 300 copies have been held for the ISMS for proposed distribution to Illinois hospital emergency rooms. Dr. English recommended that copies of this manual be sent to the chief of staff—for emergency room use in all general hospitals in Illinois—with the compliments of the ISMS. The letter accompanying the pamphlet should stress the importance of the material and request that it be made available and called to the attention of the personnel serving in the emergency rooms of hospitals.

Dr. W. E. Adams commented that the pamphlet should be a valuable one, and the action on

the part of the ISMS should be very well received by the hospital personnel. Dr. Hamm suggested that our letter include the information that additional copies are available, and give the price and where they may be purchased.

MOTION: (English-DuPuy) that the pamphlet be sent with the compliments of the ISMS, with an accompanying letter, to the chief of staff for use in emergency rooms of all general hospitals in Illinois. Motion carried.

MEMBERSHIP STATUS

It was suggested that the secretary write to the various medical schools and commercial as well as scholastic laboratories and see if other physicians not licensed in Illinois might be interested in becoming members of organized medicine in Illinois. Dr. Leland Powers was elected to membership as requested by the Chicago Medical Society.

The following physicians were elected to Emeritus and Retired membership as requested by the county society involved:

Emeritus Membership:

Flatley, Thomas J., Moline, Rock Island County
Gilliatt, Claude E., Allendale, Wabash County
Leaf, Hugh M., Elmwood Park, C.M.S.
O'Donoghue, Thomas J., Chicago, C.M.S.
Pollock, Lewis J., Chicago, C.M.S.
VanAtta, Clarence F., Ottawa, LaSalle County
Watkins, Harold R., Bloomington, McLean County

Retired Membership:

Ebersole, Glenn, Monmouth, Warren County
Ebert, Michael H., Cleveland Heights, C.M.S.
Fanning, David J., Lawn Acres, C.M.S.
Molay, Marshal D., Chicago, C.M.S.

Nesbitt, Marjorie M., Elgin, C.M.S.

Ostrom, Meredith, Rock Island, Rock Island

PRESIDENT TO SERVE ON ADVISORY BOARD

Dr. English reported that the physician in charge of the health services at the University of Illinois had discussed with him the accreditation of the 110 bed McKinley Hospital at the University, where students are cared for in emergencies. The Board of Trustees of the University wants an Advisory Board to assist in the operation of the hospital. The Advisory Board will be composed of three physicians who are members of the University faculty, the president of the Illinois Hospital Association, and the president of the ISMS. This would entail about three meetings a year, and it seems reasonable to approve that the president should participate in the provision of good emergency medical care for residents of Illinois in attendance at our state university.

MOTION: (English-Piszczek) that we approve this request. Motion carried.

IPAC FEES FOR PHYSICIANS CHANGED

Dr. Montgomery reported that the raise in fees for physicians caring for Illinois Public Aid Commission patients had been approved, and in the future physicians will be paid as follows:

\$3.00 for an office call

\$4.50 for a day home call

\$6.00 for a night home call (10:00 p.m. to 6:00 a.m.)

The next Council meeting will be held in Chicago on Sunday, August 23.

The Council adjourned at approximately 2:50 p.m.

Respectfully submitted

HAROLD M. CAMP, M.D., Secretary

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Questions and Answers on Narcotic Act

The Committee on Narcotics will be happy to answer additional questions concerning the use of narcotics under the new state law. They will be answered in this column in forthcoming issues.

Ques.: What is a registered addict?

Ans.: This term is now obsolete in Illinois, and has been since January 1, 1958. For some years prior to that time an Illinois law required that narcotic addicts register with the Department of Registration and Education. They were issued a card, as evidence of such registration.

Ques.: Why was the law repealed?

Ans.: In part, because it failed in its purpose and was misused by addicts. The original intent of the law was not to identify persons with a medical need for a narcotic but to require persons addicted to register with the hope that a count of such people could be made and they indirectly would be encouraged to look for cures.

In practice, some medical addicts registered; many nonmedical addicts also registered but many such did not. Many nonmedical addicts soon adopted the practice of calling on practitioners, presenting their addict registration cards as "credentials" for a drug ration. In this ruse they often were successful, and some still are.

Ques.: What should a practitioner do when a patient presents a registered addict card?

Ans.: It is suggested that, if the physician wishes to treat the patient, he make his own diagnosis and administer or prescribe drugs, or refrain from doing so, as his examination indicates.

It would be a favor to the Division of Narcotic Control if the names of such patients were reported to the division, since it is the desire of this office to take these registered addict credentials out of circulation.

Ques.: Has the machine audit of class-A nar-

cotic prescriptions by the division disclosed abuses?

Ans.: A few—very few, by practitioners; a substantial number by patients and others.

Ques.: What are the most common abuses?

Ans.: Forgery by addicts or peddlers in the altering or raising, of the amount of narcotics called for. In a prescription for 16 Dilaudid® tablets, the Arabic numerals 16 might be altered to read 46, 76, 96, etcetera. A prescription for 10 morphine tablets, written with a Roman "X" might be raised to read "XX" or "XXX". Some have been filled for "XXXX".

Some physicians use considerable ingenuity in writing raise proof prescriptions, when the narcotic dosage is substantial.

Then there have been a number of cases of fraud and deceit where the addict has misrepresented his physical condition; also, a number of cases where a patient with a legitimate narcotic need has been obtaining a surplus of narcotics through simultaneous treatment from several physicians, without their having knowledge of this practice.

The official prescription has, of course, almost completely stopped the practice of forging the whole prescription, except in a few cases where official blanks have been stolen. Since July 1959, the law makes unauthorized possession of official blanks a felony.

As to abuses by practitioners, there are some technical lapses and oversights, the most common one growing out of misunderstanding being the writing of official prescriptions for narcotics for office or bag supply. The long established federal law and practice to which Illinois procedure must conform, is that office or bag supply must be obtained on federal order forms furnished by the director of internal revenue and

purchased from a registered wholesale dealer or manufacturer.

Ques.: There have been published reports of narcotic addiction among physicians, as many as one per cent. Do your auditing procedures bear out such a high estimate?

Ans.: No. In approximately a year of full operation, we have uncovered less than a dozen cases of abusive self-administration of narcotics by physicians. The division not only audits class-A prescriptions but, by reciprocal arrangement

with the Federal Bureau of Narcotics, we also audit federal order forms. While the operation has not continued long enough to produce the full value of cumulative evidence, it is our opinion that the number of practitioners abusing narcotic drugs in self administration in this state is very small.

Address your queries to the Editors of the Journal or to Jacob E. Reisch, M.D., chairman, committee of narcotics, Suite 1909, 185 N. Wabash Avenue, Chicago 1.

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Rehabilitation service

It often is more effective and economical to attach a rehabilitation service to an existing hospital. Such an arrangement not only eliminates the need for the construction of a new building but also allows the utilization of hospital services for restorative medical purposes without the necessity of duplication. This refers to X-ray, surgical facilities, laboratory, housekeeping, kitchen, light, heat, and so forth. I have had the opportunity to visit small communities where not one but two and sometimes three so-called rehabilitation centers were in operation: one for children with poliomyelitis, one for cerebral palsied children, and another one a sheltered workshop or some other type of rehabilitation facility. By the very nature of the situation, these institutions were poorly staffed and were in keen competition for the one or two available physical and occupational therapists and other scarce specialists in the community. The result was a highly uneco-

nomical and ineffective operation. If all these agencies could have pooled their resources and created well equipped rehabilitation services in one or two of the general hospitals, the entire community could have enjoyed the benefits of restorative medicine and the professional staff would have had the satisfaction of working in a vigorous and effective facility. In larger communities and in teaching units there is a pressing need for the establishment of rehabilitation centers. In such settings these centers would function as the focal point of all rehabilitation activities and serve as a quasi home base for the hospital rehabilitation services. The rehabilitation center is a highly specialized and rather expensive institution which should not be organized or used indiscriminately. *Michael Dacso, M.D. Stimulation of Realistic Attitudes Toward Aging by All People and Wider Use of Rehabilitation Services. New York J. Med. June 15, 1959.*

The origin of epidemics

Payne of the World Health Organization has recently drawn attention to the inverse relationship between infant mortality rates collected from a wide variety of nations throughout the world, and the recorded incidence of poliomyelitis. Infant mortality rates generally are considered as an index of certain types of environmental sanitation. In other words, as sanitation improves, infantile mortality rates nearly always go down, and somewhat surprisingly poliomyelitis rates nearly always go up during the same general period of years. It does not mean that the decrease in infant mortality is directly responsible for an increase in poliomyelitis, but one can easily imagine reasons why these rates can be affected inversely by the same process. The suppression of opportunities for the infant to acquire enteric infantile disease of a variety of different kinds, can at the same time suppress opportunities for the acquisition of poliovirus infections, which if acquired during infancy are apt to be mild affairs. More than 99 per cent of such infantile poliovirus infections are negligible, so far as causing symptoms. They are inapparent infections, from which the infant gains some immunity. This is the most salutary form of natural immunity and it is the present basis for proposing a live virus vaccine for poliomyelitis to supplant or supplement the Salk vaccine. If, on the other hand, the infant is so protected during the early years of life that he fails to acquire these inapparent infections from local strains of poliovirus, he may subsequently reach school age having failed to gain any immunity to this infection. At this age a poliovirus infection is apt to be more severe and by college age, still more severe. Less than 99 per cent of infections are sub-clinical and that segment of the population that is non-immune grows larger each year until an epidemic comes. As such, postponement of poliovirus infections by sanitary methods along with failure to vaccinate, tends to bring on epidemics with reported attack rates for paralytic poliomyelitis which are higher than were those recorded in the days of "infantile paralysis." *John R. Paul, M.D. The Eighteenth Charles Value Chapin Oration—Chapin and Modern Epidemiology. Rhode Island M.J. June 1959.*

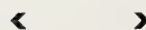
Spiritual forces

Spiritual strength is the only treasure man accumulates and keeps, and sick indeed is the person without it. As a part of office psychotherapy, the physician shares his spiritual strength unashamedly with others, realizing that patients frequently are seeking spiritual force as much as medicine. Spiritual forces help man rise above destructive, primitive drives and give direction to his intelligence, because the will power all men seek is surely intelligence combined with an ideal. *William B. Terhune, M.D. The Office Management of Psychiatric Problems. M. Ann. District of Columbia June 1959.*



More accountants needed

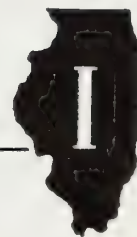
The rapid growth of the profession of certified public accounting is a significant phenomenon of American society in this century. In 1900, there were about 250 certified public accountants; today, there are more than 60,000. While this growth obviously is a consequence of the need for more professional accounting services by the nation's businesses, it would be erroneous to assume that the growth of American business has dictated the growth of the accounting profession. The accounting profession has outstripped American business in its rate of expansion since the beginning of the century and yet is still unable to supply the increasing demand. *John L. Carey. The Profession of Accounting. Hospital Management Aug. 1959.*



Thrombophlebitis and cancer

Whenever a patient is seen with unexplained recurrent thrombophlebitis, a thorough investigation should be encouraged to find a cancer somewhere in the body, especially visceral cancer. Trousseau, the master clinician, and later Sir William Osler commented on this combination. In a series of 102 cases collected from the literature, cancer of pancreas was found in 41 instances, of the lung in 22, of the stomach in 14, and elsewhere in the body in 25. *Editorial. Cancer and Certain Organic Diseases. M. Ann. District of Columbia July 1959.*

CORRESPONDENCE



Conference on Aging

Leland Hotel, Springfield

Sunday, September 27, 1959

A.M.

9:30 Welcome

Joseph T. O'Neill, Ottawa, President,
Illinois State Medical Society

9:35 "A Survey of the Problems and Needs
of Persons 65 and Over in the Bloom-
ington-Normal Area"

Vernon C. Pohlman, Ph.D., Normal,
Associate Professor of Sociology,
Illinois State Normal University

A. Edward Livingston, M.D., Bloom-
ington

9:55 "Prevention and Early Detection of
Chronic Illness in the Aged"

Henry T. Ricketts, M.D., Chicago, Pro-
fessor, Department of Medicine,
University of Chicago; Chairman,
Board of Governors, Institute of
Medicine; Member, Committee on
Aging, ISMS

10:15 "Rehabilitation of the Chronically Ill
Aged"

Edward E. Gordon, M.D., Chicago,
Director, Department of Physical
Medicine, Michael Reese Hospital

"Rehabilitation in Nursing Homes"

John A. Hackley, Peoria, Supervisor,
Rehabilitation Education Services,
Illinois Public Aid Commission

10:45 "Nursing Home Care of the Aged. Stand-
ards for Licensing Nursing Homes."

Ruth E. Church, M.D., Springfield,
Deputy Director, State Department
of Public Health,

"Nursing Home Problems"

Mrs. Florence Baltz, Washington, Ill.,
President, American Nursing Home
Association; Chairman, Joint Council
to Improve the Health Care of the
Aged

11:15 Coffee break

11:30 "Community Based Organized Home
Care Programs"

Pearl Ahrenkiel, R.N., Springfield,
Chief, Bureau of Nursing, Illinois De-
partment of Public Health,

Dorothy Campbell, R.N., Peoria, Home
Care Co-ordinator, Visiting Nurses
Association

12:00 "A Comprehensive Approach to Chicago's
Problems of Chronic Illness"

Edna Nicholson, Chicago, Executive
Director, Institute of Medicine, and
Consulting Director, Central Service
for the Chronically Ill

P.M.

12:20 Symposium: "Financing Medical Care
for Those 65 and Over" "Public As-
sistance Programs"

Peter W. Cahill, Chicago, Executive
Secretary, Illinois Public Aid Com-
mission

"Blue Cross-Blue Shield Plans in Illinois"

Robert T. Evans, Chicago, Executive
Director, Illinois Medical Service

Kenneth Clark, Rockford, Executive
Director, Medical Surgical Service,
Rockford

"Actions of the House of Delegates, Illi-
nois State Medical Society Regarding
Low Cost Insurance Programs for those
65 and Over"

Percy E. Hopkins, M.D., Chicago,
Chairman, Committee on Medical
Service & Public Relations, ISMS;
Member of the AMA Board of Trustees

1:30 Hospitality Hour

2:00 Luncheon — with the compliments of the
Illinois State Medical Society

Speaker: Frederick C. Swartz, M.D.,
Lansing, Mich. Chairman, Committee
on Aging, AMA



Clinics for crippled children listed for October

Twenty-four clinics for Illinois' physically handicapped children have been scheduled for October by the University of Illinois, Division of Services for Crippled Children. The division will count 18 general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical, social, and nursing service. There will be two special clinics for children with cardiac conditions, two for children with rheumatic fever, and two for cerebral palsied children. Clinicians are selected from among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

October 2 — Chicago Heights (cardiac), St. James Hospital

October 7 — Alton (rheumatic fever), Alton Memorial Hospital

October 7 — Champaign, McKinley Hospital

October 7 — Hinsdale, Hinsdale Sanitarium

October 8 — Cairo, Public Health Building

October 8 — Springfield, St. John's Hospital

October 9 — Evanston, St. Francis Hospital

October 13 — East St. Louis, St. Mary's Hospital

October 13 — Peoria, Children's Hospital

October 13 — Quincy, Blessing Hospital

October 15 — Elmhurst (cardiac), Memorial Hospital of DuPage County

October 15 — Flora, Clay County Hospital

October 15 — Rockford, St. Anthony's Hospital

October 20 — Belleville, St. Elizabeth's Hospital

October 20 — Danville, Lake View Hospital

October 21 — Chicago Heights (general), St. James Hospital

October 22 — Bloomington a.m. (general), p.m. (cerebral palsy), St. Joseph's Hospital

October 22 — Mt. Vernon, Masonic Temple

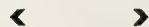
October 27 — Effingham (rheumatic fever), St. Anthony Hospital

October 27 — Peoria, Children's Hospital

October 28 — Carrollton, First Baptist Church

October 28 — Elgin, Sherman Hospital

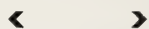
October 28 — Springfield (cerebral palsy), Memorial Hospital



Eyes in industry course

The Institute of Industrial Health of the University of Cincinnati will present a course in industrial eye problems, January 18-22. The registration fee will be \$100.

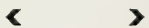
Application blanks may be obtained from the Institute of Industrial Health, Kettering Laboratory, Eden and Bethesda Avenues, Cincinnati 19.



Courses in internal medicine

The American College of Physicians announced seven postgraduate courses in internal medicine, as follows: September 28-October 2, Georgetown University School of Medicine, Washington; October 5-7, University of Buffalo School of Medicine, Buffalo; November 2-6, State University of New York Upstate Medical Center, Syracuse; November 30-December 4, Tulane University School of Medicine, New Orleans; January 11-15, Cornell University Medical College, New York; January 25-29, Henry Ford Hospital, Detroit; February 8-12, Mount Sinai Hospital, New York.

For further information write to executive director, ACP, 4200 Pine Street, Philadelphia 4.



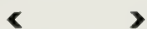
Obstetricians and gynecologists to hold meeting in Detroit

District V of the American College of Obstetricians and Gynecologists will hold its annual meeting in the Statler Hilton Hotel, Detroit, November 18-21. The district comprises Indiana, Kentucky, Michigan, Ohio, and Ontario.

Two days, November 19-20, will be devoted to

a scientific program consisting of five panels, eight scientific papers, and two prize-award papers by residents in obstetrics and gynecology. As a contribution to graduate nurse education in obstetrics and gynecologic surgery, qualified nurses will be invited to attend the scientific sessions under the sponsorship of fellows in their respective hospitals.

For further information write to Dr. Arthur G. King, district chairman, 199 William Howard Taft Road, Cincinnati 19, or Mr. Donald F. Richardson, executive secretary, ACOG, Box 749, Chicago 90.



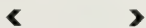
Heart research in industry to be conference subject

"Heart Research in Industry" will be the subject of the 7th annual Heart-In-Industry Conference to be held at the Sherman Hotel, Chicago, October 16. The meeting will be sponsored by the Chicago Heart Association and Chicago Association of Commerce and Industry, with a number of medical organizations and health agencies co-operating.

There will be six workshop discussion groups with panelists representing labor, management, medical research, industrial medicine, and nursing. Presentations by featured speakers will give industry a broader understanding of the benefits that accrue from an active research partnership between industry and medical science.

Dr. Andrew J. Oberlander, medical director of the Prudential Insurance Company and chairman of the Industrial Medicine Committee of the Chicago Heart Association, will be conference chairman.

For reservations write to the Association of Commerce and Industry, 30 West Monroe Street, Chicago 3, or Chicago Heart Association, 22 West Madison Street, Chicago 2.



Tumor conference in Houston

The 4th annual Clinical Conference on Tumors of the Head and Neck will be held at Houston, November 13 and 14, under the sponsorship of the University of Texas M.D. Anderson Hospital and Tumor Clinic and the University of Texas Postgraduate School of Medicine.

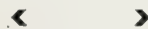
For further information, write to the Editorial Office, M. D. Anderson Hospital, Houston 25.

Military surgeons to meet

The Association of Military Surgeons will hold its 66th annual meeting in Washington, November 8-11. The theme will be "The Practice of Military Medicine—Broadening Concepts."

There will be presentations of scientific papers, a closed television program, panel discussions, and showing of scientific films.

For further information, write to the Association of Military Surgeons, 1726 Eye Street, N. W., Washington 6.

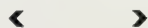


Michigan State Medical Society to meet in Grand Rapids

The 94th annual meeting of the Michigan State Medical Society will be held at the Pantlind Hotel, Grand Rapids, September 29-October 2.

The scientific program will open Tuesday noon and conclude Friday noon. Thirty-one medical teachers will report on research projects and medical practice. The House of Delegates will meet beginning Sunday evening, September 27.

Dr. M. A. Darling of Detroit will be installed as president at the officers' night dinner dance, succeeding Dr. G. B. Saltonstall of Charlevoix.



Course in medical law

A new course entitled "The Mentally Disabled and the Law" is being offered at the Law-Medicine Center of Western Reserve University, Cleveland. The 15-week course is designed for physicians, lawyers, social workers, law enforcement officials, and others interested in the mentally ill.



Obstetricians and gynecologists to hold meeting in east

District III of the American College of Obstetricians and Gynecologists will hold its annual meeting at the Hersey Hotel, Hershey, Pa., October 9-10. The district comprises Delaware, New Jersey, and Pennsylvania.

The scientific program will consist of 18 papers covering such subjects as therapeutic abortion and sterilization, carcinoma of the cervix, complications of pregnancy, hysteroscopy, dyskinesia, endometriosis, postpartum emotional difficulties, cold knife conization, cervical stump-

ectomies, radical vaginal hysterectomies, uterosacral block anesthesia, erythroblasts, operations for retroversion, uterine rupture, transverse incisions, hypofibrinogenemia, total vaginectomy, and influence of alcoholism in pregnancy.

The speakers will be prominent obstetricians and gynecologists from the eastern seaboard.

For a program or further information, write to Dr. Robert A. Cosgrove, district chairman, 8 Clifton Place, Jersey City 4, N. J., or Mr. Donald F. Richardson, executive secretary, ACOG, Box 749, Chicago 90.

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Cancer conference to be held at Cape Girardeau, Mo.

The 6th annual Southeast Missouri Cancer Conference will be held at Cape Girardeau, Mo., October 4. It is designed for physicians from Southern Illinois, Western Kentucky, Northern Arkansas, Northwestern Tennessee, and Southeastern Missouri.

The conference will be sponsored by the American Cancer Society, Missouri State Medical Association, American Academy of General Practice, and Cape Girardeau County Medical Society.

Subjects to be covered include thyroid diseases, office diagnosis and procedures, isotopes in diagnosis and treatment, and lesions of the distal bowel. A clinical session and diagnostic symposium will be held in the evening.

For further information, write to Dr. J. H. Keim, 230 North Sprigg Street, Cape Girardeau, Mo.

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Omaha Clinical Society to hold PG assembly

The Omaha Mid-West Clinical Society will hold its 27th annual assembly in the Civic Auditorium, Omaha, November 2-5. Four days of postgraduate study will be presented under the sponsorship of the Creighton University School of Medicine, University of Nebraska College of Medicine, and Nebraska Chapter of the American Academy of General Practice.

Panels will cover complications from the indiscriminate use of antibiotics, resuscitation and first aid survival management in shock, common fractures, and "what's new."

Among the 11 guest speakers will be Dr.

Claude N. Lambert, professor of orthopedic surgery, and Dr. John T. Reynolds, clinical professor of surgery, both of the University of Illinois College of Medicine.

Further information may be had from the society, Medical Arts Building, Omaha 2.

◀ ▶

American Medical Education Foundation voices its thanks

The following letter was received by Dr. Harold M. Camp, secretary of the ISMS, from Dr. George F. Lull, president of American Medical Education Foundation:

"The officers and Board of Directors of the American Medical Education Foundation have asked me to express their deep gratitude for your extremely generous contribution of \$176,330. It is understood that this represents a gift from each doctor in Illinois. It is our wish that we could individually thank everyone of the physicians who participated in this visible demonstration of concern for the financial problems of our medical schools.

"Illinois has been a consistent leader in the efforts of the American Medical Education Foundation to perpetuate our present-day high standards of medical education and practice. Other states are now following your leadership to the end that the medical profession is fulfilling its obligation toward the schools that trained them in a more significant manner each year.

"May I repeat that all of medicine is grateful to the Illinois State Medical Society and the doctors of Illinois for leading the way in this program."

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Courses in chest diseases

The American College of Chest Physicians announced three postgraduate courses, as follows: clinical cardiopulmonary physiology, Edgewater Beach Hotel, Chicago, October 5-9; diseases of the chest, Park Sheraton Hotel, New York, November 9-13; diseases of the chest, Ambassador Hotel, Los Angeles, December 7-11.

For further information, write to the executive director, ACCP, 112 East Chestnut Street, Chicago 11.

THE P. R. PAGE

John A. Mirt



A "thank you" to legislators

Illinois medicine fared unusually well in the last session of the Legislature. Most of the important bills backed by the Illinois State Medical Society were enacted. Measures considered inimical to excellent health care were shelved.

Accordingly, it is fitting that physicians should send their state senators and representatives "thank you" letters for a job well done. These will demonstrate that physicians are appreciative.

Furthermore, all physicians should maintain contact with their representatives during the time the Legislature is not in session, and offer to supply information on health matters concerning the public. This will pave the way for a better relationship when deliberations are resumed in 1961.

Winnebago County holds press conference

The Winnebago County Medical Society on June 25 held what is considered a successful Press Conference. The meeting in the Faust Hotel, Rockford, was attended by representatives from the local daily newspapers, weekly newspapers, radio stations, and a television station, along with members of the society's Public Relations Committee and Board of Directors.

A social hour and dinner preceded a purely informal airing of problems of physicians and communication media. There were no formal speeches.

The guests were permitted to speak on any

subject that came in mind. It was not a "pat on the back" session, nor a knock down and drag out meeting. One complaint often aired was a seeming lack of co-operation, at times, on the part of physicians in giving information as to the condition of patients, particularly about those who are prominent and who have been in an accident.

On that point, the Winnebago County Medical Society Bulletin had this to say:

"Those involved in the communications field felt that too often a doctor was contacted and responded with the statement, 'The patient is as well as can be expected.' They expressed the opinion that this statement is so ambiguous as to be worthless. They would prefer to be informed that the patient's condition is unchanged, or improved, or worse, critical, serious, and so forth.

"Publishers, editors, executive directors, and reporters generally recognize that physicians may be forbidden by a family from releasing any information, though they feel that prominent personages in the community who take this position are using poor judgment, for they point out that they will get the information they seek from some source, and they would prefer to have the information accurate.

"There was also a great deal of discussion about the source of medical news, such as a switchboard operator or a nurses' aid. Other items were bantered about. The request was eventually made that a joint committee of doctors and communications personnel should be formed

to develop a code which all interested parties would follow."

The Winnebago County Medical Society's PR Committee plans to work out such a code and hopes to hold a similar press conference annually.

What does "best medical care" mean

The term, "best medical care," is used frequently in statements directed to the public. What does the medical profession mean by this?

Dr. Malcolm S. Watts of San Francisco has a personal opinion which he expresses in the California Medical Association's "Newsletter." Dr. Watts seems to answer the question fully. He says:

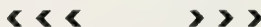
"The best medical care embodies the essential elements of medical practice. These include the need of an individual patient for help with a particular problem, the motivation of the physician and his concern with the individual patient, the secure belief of the patient that the physician can and will help, and the tool or technology by which the help is given.

"It considers the economic, social, and political predicament of the patient in terms of his need for medical care. It insures that the doctor's

primary allegiance remains to the patient and that it is not unduly diluted by financial or other responsibilities to collective groups within or without the profession. It provides for freedom of action for both doctor and patient, before and after illness strikes, in order that the patient may derive the physiological benefit and psychological comfort of faith in his medical care. It requires the economic, social, and technological availability of competent physicians, ancillary personnel, and adequate facilities for service.

"The best medical care must always be vital, dynamic, changing, growing. It is inescapably a product and a part of the traditional American system of growth and development through free enterprise. It must adjust to the American way of life. This includes rising costs, deficit financing, and the use of prepayment, tax-free, and tax funds in medical care. It has an opportunity to respond to the great urge of almost every American to improve his standard of living.

"Most Americans will pay more for better cars, better housing, better food, or clothing. They can and will pay more for better medical care if they understand its costs and are convinced of its benefits."

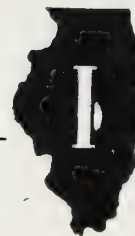


The adaptive phenomenon

It is important to keep in mind that no disease is due exclusively to a "derailment" of adaptive phenomena, nor is there any malady in which adaptive phenomena play no role at all. In order to produce disease, there always must exist some direct, purely aggressive and nonadaptive action of a pathogen. On the other hand, there hardly exists any pathogenic action which does not elicit some adaptive phenomena. Such an overlap between groups does not minimize the practical value of the principle of classification. There

hardly exists a disease which could not be properly included in several of the classic categories of pathology. Rheumatic fever undoubtedly is a joint disease, but it also is a cardiac disease, a connective tissue disease, and an infectious disease. Although the subjects of the natural sciences cannot be forced into watertight, nonoverlapping compartments, this does not alter the fact that without classification there is no science. We need the classes, because no generalization is possible without them. *Hans Selye, M.D. The Physiopathology of Stress. Postgrad. Med. June 1959.*

AT THE EDITOR'S DESK



HOOPS, MY DEAR

The British Medical Journal printed an unusual sequel of the hula hoop by a correspondent, F.B.E. Kampfner. The patient was a 29 year old Chinese woman who developed severe right lower abdominal pain after vigorous exercise with a hula hoop. Operation disclosed "a right sided tubo-ovarian cyst bound down with numerous adhesions, that had undergone partial torsion, and a left similar but more mobile mass that was unaffected." This was a hula of a twisted ovarian cyst. Someone defined a navel destroyer as a hula hoop with a nail in it.

SKIN BANKING

Records are broken every day by men sitting on flag poles, running in bunion derbies, ascending in balloons, and swallowing goldfish. A Duke University plastic surgeon just broke a 400 day record of keeping a piece of dog skin alive for 1,480 days. The skin was kept in a special chemical solution at a temperature of minus 49 degrees F. and grafted successfully after four years of preservation.

NO PURPOSE

Disposable hypodermic needles and syringes are being pushed hard. One manufacturer hits the physician below the belt in a news release for public consumption. "The advantages," according to the release, "assure a sharp needle every time and eliminates the danger of improper

sterilization. Dull needles are one of the main causes of pain from injections. Improper sterilization can spread various hepatitis diseases and staphylococcus infection."

It is difficult to interpret the purpose of a release of this type. We assume the company wants our patients to insist that disposable syringes and needles be used because they don't hurt and they won't spread hepatitis or the terrible staph infections that are baffling the medical profession. Most physicians know about sharp needles and the need for thorough sterilization. There must be a better reason for using these disposable units.

MONEY WELL SPENT

The Life Insurance Medical Research has allocated \$1,205,510 this year for heart research in 64 medical institutions in 22 states, the District of Columbia, four Canadian provinces, and Mexico.

IT'S OFFICIAL

Many organizations are regarded as having the last word in various fields. No one dares to dispute the recommendations of the Chicago Motor Club when it comes to mapping the best route to Pella, Iowa or Bryan, Ohio. The National Foundation has the last word on polio and no one understands cancer as well as the American Cancer Society. The American Red Cross adopted the "mouth to mouth" technique of

artificial respiration last month. They have the corner on this maneuver, which makes it official.

A FAMILY HISTORY OF CANCER

Cancer does not run in families. This conclusion was reached in an eight year comprehensive study of 12,000 persons by Douglas P. Murphy, emeritus professor of obstetrics and gynecology at the University of Pennsylvania.

Two groups were studied; 200 living women with breast cancer and 200 living women without breast cancer. Approximately 12,000 relatives of these 400 women were interviewed and if anything, the frequency of cancer in the family was slightly higher in the control group. A follow-up study of the cause of death of all interviewed will make an interesting project for the future.

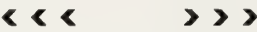
VITAMIN E

The FDA has recognized the need for vitamin

E in human nutrition based on studies showing a deficiency in cystic fibrosis. They have not set minimum daily requirements. On the other hand, the FDA does not favor claims that vitamin E induces fertility or helps heart disease.

FOOD AND CANCER

Representative Delaney (D-N.Y.) is becoming (against his wishes) the Washington champion of medical crackpots and food faddists through his legislation against the adulteration of foods with certain chemicals, including colors. Delaney is said to have strong feelings on the relationship between chemicals in food and cancer. He is in a position to force a cancer provision into food and drug legislation because of his membership on the House Rules Committee. He admits he is only a layman and must rely on his scientific advisors. There has been criticism that his advisors are somewhat opinionated along the same line of thinking.



Quiet in hospitals

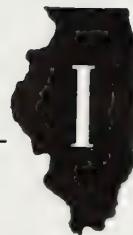
Many patients have complained that there is too much noise in our hospitals. We are aware, of course, that sick people are inclined to be more critical concerning conditions which affect them than are those who are well. The ill person, lying in bed or sitting in an easy chair, in an atmosphere of inactivity, is understandably sensitive to crashes and bangs, loud conversation and bells, and various other sounds that annoy him. His distaste for unpleasant sounds can be understood. Usually, after his objections are registered, something is done to relieve the situation.

Noise cannot correctly be attributed to garbage cans, china dishes, banging doors, squeaky carts, conversation, and the like. It is more correctly charged to people — visitors, employees, doctors, nurses — to the way we do our work. None of us would intentionally disturb patients.

If we recognize that the proper performance of our jobs includes working quietly and with a minimum of confusion, these noises would be prevented.

We expect our employees to do their work effectively and efficiently. I believe that people inherently want to perform their duties in a manner that produces creditable results. If employees are too noisy, the responsibility can be charged to "improper" or "insufficient" supervision. The employee has not been instructed sufficiently concerning his duties or has not been made to understand that his work can and must be done quietly. The equipment he uses need not be noisy — doors need not bang, cart wheels squeak, garbage can lids crash. Two simple and easy remedies for these conditions are correct job instruction and good preventive maintenance. *Arthur D. Barnes. It's the People Who Make the Most Noise. Hospitals July 1, 1959.*

NEWS of the STATE



COOK

AWARDS. Dr. Spyridon G. A. Alivisatos, assistant professor of pathology, Chicago Medical School, received the school's board of trustees research award for his work on the effect of histamine upon living cells.

HONORED. Dr. Loyal Davis, chairman of the department of surgery, Northwestern University Medical School, received an honorary fellowship in the Royal Academy College of Surgeons of Edinburgh. In 1955, Dr. Davis received the honorary fellowship of the Royal College of Surgeons of England.

More than 300 leaders in medical research, the pharmaceutical industry, science education, and publishing gathered July 22 to honor Dr. Morris Fishbein, medical scientist, author, and lecturer, on his 70th birthday. A portrait of Dr. Fishbein by John Doctoroff was presented at the dinner, and is now in the library of the Hektoen Institute for Medical Research.

Dr. Louis B. Newman, chief, physical medicine and rehabilitation, VA Research Hospital, Chicago, was the recipient of the 1959 Citation for Public Service from the University of Chicago.

FELLOWSHIP. Dr. Frank Mitchell, Jr., engaged in general practice in Chicago for the past two years, has been awarded a Wyeth laboratories pediatric residency fellowship. A graduate of the University of Illinois, he will take his residency at Cook County Hospital.

LECTURES. The theme for the tenth annual North Shore Hospital lecture series will be "Office Management of Emotional Disorders." The opening lecture will be at the hospital, 225 Sheridan Road, Winnetka at 8 p.m. on October 7. Dr. John I. Nurnberger, professor and chairman, department of psychiatry, Indiana University Medical School, will speak on "Diagnostic Signs and Symptoms of Emotional Disorders."

LECTURES. Dr. M. A. Perlstein, chief of the children's neurology clinic, Cook County Hospital and associate professor in pediatrics, Northwestern University Medical School, presented "Medical Aspects of Neuromuscular Diseases of Children," at the recent eleventh annual postgraduate assembly of St. John's Hospital, Santa Monica, California. On October 29 and 30, he will be a speaker at the Institute of Logopedics, Wichita, Kansas.

NEW OFFICERS. The following are newly elected officers of the Chicago Society of Industrial Medicine and Surgery: Drs. George J. Cooper, president; Richard E. Heller, vice president; Bille Hennen, secretary; and Charles Drueck, treasurer.

NEW POSTS. Dr. Orville T. Bailey, professor of neuropathology, Indiana University School of Medicine, has been appointed professor of neurology at the University of Illinois College of Medicine. He succeeds Dr. Percival Bailey [not related], who retired from the university September 1.

Dr. George J. Rukstinat was elected president of the medical staff of Holy Cross Hospital. He succeeds Dr. Edward J. Krol. Other officers elected were Dr. John J. Simonaitis, vice president; Dr. Helen Bruch, secretary; and Dr. Jacob A. Goodhart, treasurer.

SYMPOSIUM. The Chicago Diabetes Association will conduct its third annual symposium on diabetes mellitus at Thorne Hall, Northwestern University, 740 N. Lake Shore Drive, on October 1. Dr. Charles H. Best, this year's Woodyatt Memorial Lecturer, has chosen "Recent Work on Glucagon" as his topic. The luncheon recess will be used as a discussion period and physicians who wish to do so, may reserve a place with a discussion group. A fee of \$25 will be charged for enrollment in the symposium. Members of the American Diabetes Association, the Chicago Diabetes Association, medical students, interns, and residents may attend without charge, but must register for the course. Inquiries should be addressed to: The Chicago Diabetes Association, 5 South Wabash Avenue, Chicago 3.

MACON

RETIREMENT. Dr. M. E. Rose, Decatur, announced his retirement after 43 years of active practice. A graduate of Rush Medical College, he was president of the Macon County Medical Society, and of Macon County Hospital. Dr. Rose has been a member of the Board of Education and Association of Commerce; a faculty member of the Macon County Hospital's nursing school teaching internal medicine for 25 years; and a life member of the American College of Physicians.

WARREN

HONORED. Dr. Ralph P. Graham, retired physician and surgeon of Monmouth, was present for cornerstone laying ceremonies of the new men's residence hall of Monmouth College. The \$400,000 building, now under construction, is named for Dr. Graham, Monmouth College '97, and his father, Professor Russell Graham, Monmouth College '70.

GENERAL

NEW TEST. A new diagnostic test for aphasia has been developed by research teams from the University of Chicago and the University of North Carolina. Five teams are administering

the test at middlewestern and eastern hospitals and clinics so that it can be standardized for general use at aphasia centers throughout the country. Plans are to release the test for use in November. It has been under development for the past three years by research groups led by Joseph M. Wepman, of the University of Chicago, and Lyle V. Jones, of the Psychometric Laboratory at the University of North Carolina. Technically called the Language Abilities Survey, the test has been administered to more than 200 patients. These and additional tests are required to standardize the interpretations of patients' responses.

Therapy at the University of Chicago Clinics consists primarily of motivating the patient to practice the use of language. To do this the Clinic's therapists often must learn to use the terms of the patient's major interest prior to his illness.

JOSEPH A. CAPPS PRIZE. The Institute of Medicine of Chicago is offering a biennial prize of \$500 for the most meritorious investigation in medicine or in the specialities of medicine. The investigation may be also in the fundamental sciences, provided the work has a definite bearing on some medical problem. Competition for 1959 is open to graduates of Chicago medical schools who completed their internship or one year of laboratory work within a period of five years prior to January 1, 1959, excluding their terms of service in the Armed Forces. Manuscripts must be submitted to the Secretary of the Institute of Medicine of Chicago, 86 East Randolph Street, Chicago 1, not later than December 31, 1959.

PROSTHETIC EDUCATION PROGRAM. Northwestern University Medical School announced the launching of its prosthetic education program, the first facility of its kind in the midwest. The new school will operate on a training grant from the Department of Health, Education, and Welfare, Office of Vocational Rehabilitation. Courses in the new school will disseminate contemporary information about the prescription, fabrication, and fitting of artificial limbs and braces and the rehabilitation of the orthopedically handicapped. Twenty-one courses lasting from one to three weeks each will be offered during the academic year to physicians, prosthetists, therapists, and rehabilitation counselors. The instructors and consultants will be drawn from Northwestern's

departments of orthopedic surgery, physical medicine, and the prosthetic research center; from the Rehabilitation Institute of Chicago; from the University of Illinois College of Medicine; Loyola University's Stritch School of Medicine; and the VA. There also will be qualified instructors from the prosthetic industry. Directly responsible for the organization of the new program is its academic adviser, Dr. Clinton L. Compere, associate professor in orthopedic surgery at Northwestern. The director is J. Warren Perry, Ph.D., assistant professor of neurology and psychiatry, Northwestern. Herbert Blair Hanger is chief prosthetist and assistant director. The school is located in the Rehabilitation Institute of Chicago at 401 E. Ohio St.

WHITE HOUSE CONFERENCE ON AGING. Arthur S. Flemming, secretary of Health, Education, and Welfare, announced today that governors of 35 states and territories have designated representatives to plan for the White House Conference on Aging to be held in Washington, D.C. January 1961. Under the Act authorizing the Conference, the governors' designees are eligible for federal grants of \$5,000 to \$15,000 to help finance state conferences on aging and to defray costs of state participation in the national conference. Representatives for Illinois are Dr. Otto L. Bettag, director of the Illinois department of public welfare; Peter W. Cahill, executive secretary of the Illinois Public Aid Commission, and Dr. Roland R. Cross, director of the Illinois Department of Public Health.

"YOUR HEALTH COMES FIRST" OVER RADIO CHICAGO WJJD:

AUGUST 26 at 9:15 P.M.: **ROBERT E. LEE**, clinical professor of medicine, Stritch School of Medicine of Loyola University, discussed "An Adequate Diet Important to Health."

SEPTEMBER 23 at 8:30 P.M.: **COYE C. MASON**, clinical associate professor of pathology, University of Illinois College of Medicine, "Should I Be a Blood Donor?"

These are public service programs sponsored by the Illinois State Medical Society in co-operation with Radio Chicago WJJD.

PROGRAMS ARRANGED BY THE ILLINOIS STATE MEDICAL SOCIETY:

BENJAMIN BLACKMAN, instructor in neurology and psychiatry, Northwestern University Medical School, addressed "Divorcees Anony-

mous" at the Chicago Temple, September 8, on "Psychosomatic Illnesses Related to Problems of Marriage and Divorce."

WILLIAM H. REQUARTH, Decatur, associate professor of surgery, University of Illinois College of Medicine, addressed the Vermilion County Medical Society in Danville, September 8, on "The Treatment of Traumatic Wounds."

HOWARD R. MILLER, Peoria, member of the American Academy of Pediatrics, addressed the Henry County Medical Society in Kankakee, September 9, on "The Diarrheas of Infancy."

EDWARD F. SCANLON, associate in surgery, Northwestern University Medical School, addressed the LaSalle County Medical Society September 10, on "The Latest Cancer Therapy."

JORDAN M. SCHER, associate in neurology and psychiatry, Northwestern University Medical School, addressed the Stephenson County Medical Society in Freeport, September 17, on "The Problems of Depression — Its Diagnosis, Management, and Natural History."

SANFORD A. FRANZBLAU, clinical assistant professor of medicine, University of Illinois College of Medicine, addressed the Lake Zurich Community Woman's Club, September 18, on "Adding Life to Your Years."

HENRY H. FINEBERG, assistant professor of neurology and psychiatry, Northwestern University Medical School, Vermilion County Medical Society in Danville, October 6, on "Management of Behavior Problems in the Community."

JOHN H. MATHIS, Peoria, member of the staff of the Methodist Hospital, LaSalle County Medical Society, October 8, on "The Urologic Patient."

ALAN R. FEINBERG, associate in medicine, Northwestern University Medical School, Kankakee County Medical Society in Kankakee, October 20, on "What's New in Allergy."

JOHN HOWARD SCHNEEWIND, associate attending surgeon at Presbyterian-St. Luke's Hospital, Stephenson County Medical Society in Freeport, October 15, on "Management of Acute Hand Injuries."

DEATHS

WILLIAM M. BURBACH*, retired, Chicago, who graduated at Northwestern University Medical School in 1905, died July 18, aged 81. He had practiced medicine in Chicago 45 years.

*Indicates member of the Illinois State Medical Society.

DWIGHT E. CLARK*, Chicago, who graduated at the University of Rochester School of Medicine in 1937, died July 24, aged 49. He was chairman of the department of surgery and professor of surgery at the University of Chicago School of Medicine, vice president of the Society of Nuclear Medicine, and a member of the board of governors of the American College of Surgeons.

HARRY CULVER*, retired, Chicago, who graduated at Rush Medical College in 1913, died August 5 while vacationing in Glen Eagles, Scotland. He was 73. Before his retirement 10 years ago, he was head of the departments of urology at Cook County and St. Luke's Hospitals.

WILLIAM DAVIES*, Lyons, who graduated at Northwestern University Medical School in 1924, died April 19, aged 78. He was associated with the MacNeal Memorial Hospital in Berwyn.

FRED C. FRANKE, Oak Park, (licensed in Illinois in 1898), died in the U. S. Public Health Service Hospital in Chicago, April 22, aged 85. He had served on the staff of St. Anthony de Padua Hospital.

JOHN BAPTISTE HALL, SR.*, Chicago, who graduated at the University of Pennsylvania Department of Medicine, Philadelphia, in 1901, died in the Chicago Home for Incurables, April 23, aged 82. He formerly practiced in Boston and at one time was appointed to the advisory council of the state department of public health.

JACOB MOLIER KELLER, Steeleville, who graduated at Washington University School of Medicine, St. Louis, in 1904, died March 17, aged 79.

PHILIP R. LATTA*, LaGrange, who graduated at the University of Illinois College of Medicine in 1937, died July 17, aged 48. He was a Fellow of the American Academy of Dermatology and Syphilology.

BENJAMIN P. LIPNIK*, Momence, who graduated at the Chicago Medical School in 1942, died July 30, aged 46. He was a member of the staff of St. Mary's Hospital in Kankakee.

ARTHUR WILHELM LO VENE, Galesburg, who graduated at Illinois Medical College, Chicago, in 1908, died in Peoria, April 14, aged 76. He was associated with the Mercy Hospital in Burlington, Iowa.

FRANCIS V. MALLOY*, Chicago, who graduated at Loyola University School of Medicine in 1916, died in Elgin State Hospital, March 15, aged 69. He had served on the staff of the Veterans Administration.

ALFRED V. OLDENBURG, Chicago, who graduated at Jenner Medical College, Chicago, in 1906, died July 20, aged 77. He had practiced in Chicago more than 50 years.

GRACE F. SMITH, Chicago, who graduated at the Chicago College of Medicine and Surgery in 1913, died in the Englewood Hospital, April 1, aged 72.

RUTH E. TAYLOR*, Buffalo, recently of Chicago, who graduated at Rush Medical College in 1924, died July 18, aged 63. She was formerly a physician for the student health service at the University of Chicago.

JOHN J. WALSH*, Chicago, who graduated at Loyola University School of Medicine in 1934, died July 29, aged 51. He was clinical instructor in ophthalmology at the University of Illinois College of Medicine, and a member of the staffs of Presbyterian-St. Luke's and Mercy Hospitals.

BYFORD H. WEBB*, retired, West Frankfort, who graduated at St. Louis University School of Medicine in 1906, died January 21, aged 78.

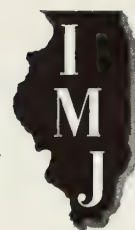
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The Advantages of Physical Fitness

PAUL D. WHITE, M.D., BOSTON, MASS.

Physical fitness includes many aspects of health, one of which is the protection of the human body from the infections that have beset us in the past and that still threaten us. Here we can be somewhat content with the progress we have made in preventive medicine. Not only the athletes of today, but all of us, feel reasonably confident that our careers in youth and middle age will not be interrupted by the epidemic diseases of the past such as plague, cholera, diphtheria, meningitis, or pneumonia. On the other hand, we are threatened with the diseases that seem to come with prosperity, which manifests itself in a soft way of life. As a result, we have overnutrition, high blood pressure, and; today's popular disease of the arteries—namely, atherosclerosis.

Insurance and vital health statistics have demonstrated clearly the shortening of life, and also the hazard in other respects, in at least 95 per cent of persons afflicted by obesity. The cause is too many calories, whether they come from carbohydrate, protein, or fat. As a rule, the combination of surpluses of all three is responsible. It is, however, beginning to be indicated by cur-

rent researches that the fat in the diet—especially if copious in amount and of animal origin—may be more hazardous than equal caloric contents of carbohydrate or protein.

Obviously then, physical fitness is injured by overweight and enhanced by normal weight. As a matter of fact, it is better to be what some persons consider too thin than to have any extra pounds. It isn't just the extra pounds under the skin that count; much of the fat goes elsewhere than subcutaneously, including the inner lining or intima of the important arteries of the body. This includes the coronary arteries that supply the heart muscle with blood; the carotid, vertebral, and basilar arteries that supply the brain; the renal arteries that supply the kidneys; the abdominal arteries that supply other viscera; and the aorta and iliac arteries that supply the circulation to the legs.

Perhaps not so important, but nevertheless of great significance in physical fitness, is a regular habit of vigorous exercise. Physiologically, it has been well demonstrated during the last generation or more that physical activity with vigorous use of the muscles, is advantageous to health. Good muscle tone, especially of the legs, improves greatly the return of blood from the dependent portions of the body to the heart thus

Presented at the Sports Medicine Congress, Pan American Games, Inc., Chicago, Sept. 1, 1959.

supplementing the work of the heart itself. The veins of the extremities have important valves to send the blood in the right direction. These valves were demonstrated as long ago as 1603 by Fabrizio d'Acquapendente and the knowledge of their function established the conclusive proof by William Harvey of the circulation of the blood, presented in his memorable book, *De Motu Cordis* in 1628.

There is thus great importance in having good muscle tone in the legs which have some of the largest muscles of the body and where the effect of gravity tends to hinder the flow of blood back to the chest and head. Good muscle tone of the diaphragm also is very important in aiding the return of blood to the chest through the action of the thorax as a suction pump which serves also for the inhalation of air whereby to oxygenate the blood and rid it of carbon dioxide and some water.

Two other physiological effects of regular and vigorous exercise should be mentioned. One is its favorable function as an antidote to nervous tension. Exercise is one of the best means for relaxation, general muscular fatigue being conducive to physical and mental rest and sleep. A second benefit is that vigorous exercise helps prevent obesity, although diet is of primary importance in this respect. Unfortunately, the amount of physical exercise either in work or in sports carried out by the average man or woman in the more prosperous countries in the world today has reached a low minimum. We are slaves to labor saving devices such as automotive equipment and to television. Despite the obvious usefulness, indeed the necessity, of the moderate use of the pushbutton to our living today, we must be wise enough to be their masters and not their slaves.

It happens that along with the current lack of exercise and the enrichment of the diet and overnutrition of today there has occurred in countries of greater prosperity an alarming amount of serious high blood pressure and coronary heart disease. The relationship between lack of muscular exercise and overeating on the one hand, and the diseases just mentioned on the other, needs extensive and intensive investigation which is being initiated by a few pioneers.

Diseases of the arteries throughout the body now hold first place in mortality and probably also in morbidity. Not only has the heart suf-

fered severely from atherosclerosis of the coronary arteries but the brain too is crippled by extensive atherosclerosis of the arteries supplying blood to the brain, the kidneys are damaged by reduction of their arterial blood supply [which incidentally can be an important cause of hypertension], and the circulation in the legs is becoming increasingly hampered by atherosclerotic changes in the lower aorta and its main branches—the iliac arteries. It has been said by some that arterial disease is increased by exercise but almost all the evidence points the other way. However, much more work must be done on this problem.

We can cite individual cases or even groups of individuals who apparently have been helped in their longevity and in the avoidance of important coronary heart disease by vigorous sport. One recent example that has come to my attention is that of a marathon champion who died at 70 of cancer after having spent much of his life in preparing for and in taking part in marathon races. It is estimated that he ran at least 250 such races, many of which he won in his younger days. This man was Clarence DeMar of New England. Postmortem examination showed a heart muscle in perfect condition, normal in size, with wide open coronary arteries.

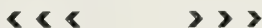
There has been a follow-up of several hundred Harvard University football players who obtained their letters in the years between 1900 and 1930. A considerably better record so far as coronary heart disease is concerned was shown by those who maintained vigorous athletic activity throughout life than in those who took little or no exercise after graduation. Several follow-up studies of oarsmen and other athletes have shown much the same findings. Despite these studies, much more extensive research still needs to be done. It is also of interest that well trained athletes can accomplish remarkable feats even in the presence of disease of the heart and arteries, although much judgment must be exercised individually in every case with respect to advice to these athletes.

Finally, in contrast to the intense interest justly deserved in promoting both the fitness of children and youth of today and the health of aged people, there has been a sad neglect of the long period of middle age, which may be said to extend from the early 20's when full growth is achieved up to the beginning of old age in the

early 70's. It has become the custom for young people to adopt all the labor saving devices, to stop taking any adequate physical exercise, and to eat so richly they gain a pound or two a year for several decades. This is in contrast to the current customs of the populations in less privileged countries and to those of the ancestors, sometimes the immediate ancestors, of these very individuals who have adopted a soft way of life. This new way of life should be investigated more thoroughly as to its effect in the promotion of heart and blood vessel disease as well as to its possible effect on the mental and spiritual health of all the world. The greatest challenge of public and of private health today, and the most neg-

lected, is that of physical fitness in middle age. It transcends, I believe, the problems of health of both youth and senility. The laudable goal of improving the physical (and mental) health of our youth should have no age limit at any decade but it ought to continue on where it is most needed all through life. The problem of our aged, will thereby be greatly lightened. It is not God's will that we should suffer from atherosclerosis, or any other diseases for that matter, in youth or middle age; it is our own fault. As Shakespeare said "our remedies oft in ourselves do lie, which we ascribe to Heaven."

264 Beacon St.



Ileocolitis

The medical program of ileocolitis consists of bed rest, a bland, low residue, high calorie diet, antispasmodics, intestinal antibiotics, and mild sedation. Steroids, especially Acthar Gel,[®] may be tried but have proved more beneficial with the ulcerative process than with the granulomatous lesions. However, the sense of well being and improvement in appetite produced by the steroids are no small assets even in granulomatous regional enteritis. In prescribing intestinal antibiotics one must be mindful of the possibility of staphylococcal enteritis if wide spectrum antibiotics are employed for long periods of time. Vitamin deficiencies must be corrected. Crohn has advocated the use of vitamin B 12 if malabsorption is suspected from bulky, fatty stools or a blind loop is known to exist. Symptomatic blind loops must be resected. *Benjamin B. Jackson, M.D. A Review of the Management of Chronic Ileocolitis. J. Kentucky M.A. May 1959.*

Drug reactions

As might be expected with a potent oral (hypoglycemic) drug the commonest complaints are those referable to the gastrointestinal tract. These have included peculiar taste in the mouth, anorexia, nausea, dyspepsia, epigastric distress, vomiting, cramps, abdominal pain, fullness, and diarrhea. Gastric tolerance was found to be improved when the drug was administered with food. With respect to incidence, figures as high as 11 per cent have been reported, but this high incidence was markedly reduced by lower initial and maintenance dosages. Although sufficiently severe in some instances as to preclude conversion to oral therapy, these gastrointestinal disturbances usually are without sequelae unless vomiting and diarrhea further compromise electrolyte balance in a precarious diabetic employee. *B. E. Bennison, M.D. Hypoglycemic Agent Toxicity. J. Occupational Med. July 1959.*

Acute Pancreatitis: Clinical Experiences in Diagnosis and Management

E. LEE STROHL, M.D., WILLIS G. DIFFENBAUGH, M.D., AND STEVEN H. NYL, M.D., CHICAGO

ACUTE hemorrhagic pancreatitis was produced by Claude Bernard, in experimental animals, more than a century ago.² He injected bile, mixed with sweet oil, into the pancreatic ducts of cats. The intervening century has produced an extensive literature on the disease, dealing with the anatomy, physiology, pathology, and the etiological factors involved in the disease. Despite all the extensive investigations, the cause of the disease is still an enigma.

Enzyme determinations have not proved as significant as was proposed originally^{8,13} in establishing the diagnosis. It has been demonstrated repeatedly that other acute abdominal pathology will produce enzyme elevations similar to the changes found in acute pancreatitis.^{32,28,21,33} The problem is magnified when acute pancreatitis develops in the early postoperative period, or when there are associated changes in other organs.^{9,20,14,35,37,18}

In the past, patients were admitted frequently in a terminal state of acute pancreatitis, and died a short time after admission to the hospital. With the current trend toward early hospitalization of acute abdominal emergencies, patients are seen and treated more frequently in the early stages of the disease. Many patients with acute edematous pancreatitis, treated by conservative measures, do not progress beyond this stage of the disease. On the contrary, surgery should not be postponed when there is a question of other acute abdominal pathology or when there is progression of the disease to necrosis and abscess formation. Is it possible that the pendulum has swung too far in favor of conservative treatment? How great is the danger of overlooking acute abdominal pathology, such as acute gan-

grenous cholecystitis or a perforated peptic ulcer when conservative treatment is practiced routinely in the presence of an elevated serum amylase?

Case 1: C. W., a white man 37 years of age, entered St. Luke's Hospital complaining of excruciating epigastric pain. The leucocytes numbered 19,500 per cu. mm. The serum amylase was 256 units (Somogyi iodine method, normal, 8-64 units). The oral temperature was 101.6°F. The temperature became normal within 36 hours with conservative treatment. The leucocyte count dropped to 14,800 per cu. mm. The serum amylase returned to normal. A tender mass became palpable within 48 hours in the right upper abdominal quadrant. Operation was performed 72 hours after admission. The pancreas was normal. The gall bladder was edematous and markedly distended, with an area of gangrene in the fundus. Cholecystostomy was performed. The course was uneventful and the patient left the hospital on the eighth postoperative day. Cholecystectomy was performed at a later date.

It has been observed clinically that attacks of acute pancreatitis usually follow a full meal within a period of two or three hours. This observation is significant, as the same relationship has been noted experimentally.^{12,39} Two clinical entities seem to occur; acute edematous or interstitial pancreatitis, and acute hemorrhagic or necrotic pancreatitis. The former is associated with a mortality rate of 5-10 per cent; the latter has a mortality rate of 50-60 per cent. Elman has stated that acute edematous pancreatitis is a distinct pathological entity and not merely an early stage of pancreatic necrosis,¹³ as Zoepffel had postulated.⁴⁰ Irenius demonstrated experimentally that all stages of pancreatitis, from mild edematous to acute hemorrhagic necrosis, can be produced by varying the quantity of bile injected into the pancreatic ducts.²² It would seem that edematous pancreatitis is merely one stage in the process and many patients never progress beyond this stage. Other patients

From the Departments of Surgery, Presbyterian-St. Luke's Hospital and the University of Illinois, Chicago.

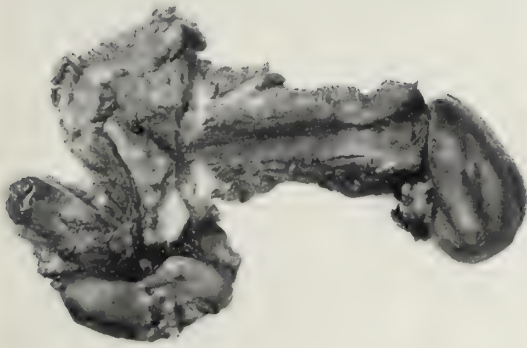


Figure 1. Gross specimen demonstrating acute hemorrhagic pancreatitis and thrombosis of the splenic vein.

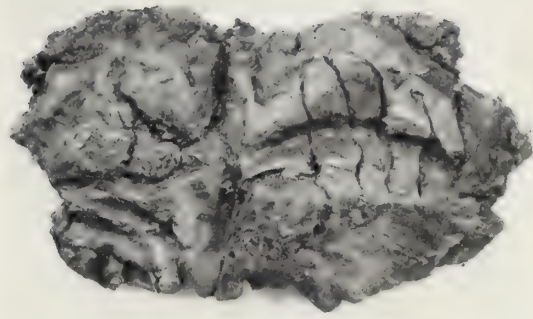


Figure 2. Gross specimen demonstrating hemorrhagic and necrotizing pancreatitis. Areas of fat necrosis are present, as well as hemorrhagic infarcts.

develop repeated mild attacks of pancreatitis, and areas of localized necrosis. Calcification develops in these necrotic areas, leaving but a small amount of functioning pancreatic tissue. Some of the factors necessary for the transition from edematous pancreatitis to necrotizing pancreatitis are known.^{29,38,3,10,5} MacKenzie states that the addition of a vascular component to an edematous pancreatitis is the principal factor in the onset of necrotizing pancreatitis, or in his words, "Ischemia in an edematous gland".²⁶

The transition from edematous to acute hemorrhagic pancreatitis may be illustrated in the following cases reports:

Case 2: B. W., a 38 year old female, entered St. Luke's Hospital for gall bladder surgery shortly after an attack of acute calculus cholecystitis. The patient undoubtedly had an associated smoldering acute pancreatitis, as there was a trace of sugar in the urine, which had not been present prior to the attack of acute cholecystitis. Fifteen hours after admission, before the surgery was done, she suddenly developed severe shock and died shortly thereafter. Postmortem examination revealed acute calculus cholecystitis, a mass of inspissated soft gray material in the lumen of the pancreatic duct, 12 cm. from the ampulla, as well as acute hemorrhagic pancreatitis and a recent thrombosis of the splenic vein. (Figure 1)

Case 3: W. H., a 71 year old businessman, entered St. Luke's Hospital with a history of severe epigastric pain following his evening meal, with emesis, perspiration, and shock. The rectal temperature was 103.4°F. The abdomen was distended and the patient cyanotic. The blood count revealed hemoconcentration of 5.6 million rbc per cu. mm. and a hemoglobin of 18.8 gm. per 100 cc. The admitting diagnosis was acute myocardial infarction, as he had known cardiac disease and diabetes mellitus. Serum amylase was 512 Somogyi units (normal 50-150 units). He died two days later. Postmortem

examination showed acute hemorrhagic and necrotizing pancreatitis, with thrombosis of the splenic vein, hemo-peritoneum, and extensive hemorrhagic infarcts of the pancreas. (Figure 2)

SYMPTOMS

The patient with acute hemorrhagic or necrotizing pancreatitis presents a dramatic clinical picture which once seen is never forgotten.¹⁵ The outstanding symptom is severe, steady, and prolonged pain. It usually is located in the epigastrium and radiates frequently to the back. The patient may assume a flexed position, with his hands pressed into the abdomen, as if pressure relieved pain. Morphine has little or no effect and may accentuate pain. Other authors have stated that nausea and vomiting are not common. We have observed that vomiting is a prominent and important symptom. It adds significantly to the electrolyte imbalance, which develops because of diffuse visceral edema and intraperitoneal effusion. The severity of the symptoms tends to parallel the extent of the pathological process. An early shocklike state may exist or be delayed and develop suddenly at a time when the patient seems to be progressing toward recovery. Abdominal tenderness is common but rigidity is seen infrequently. Distension is a frequent finding. Bowel sounds may be present; if so, they add to the difficulty in establishing diagnosis. Pulmonary signs, with rales and effusion, are not uncommon findings.

Repeated serum amylase determinations are more important than a single determination. One amylase determination, unless made in the early stages of the disease, may not be helpful.

The height of the rise of serum amylase may not reflect the degree of the pathology in the pancreas. There may be a fatal destructive necrosis of the gland, with a normal serum amylase.

Case 4: G. P., a 53 year old dentist, entered St. Luke's Hospital with a history of sudden, severe epigastric pain. He was in shock, with hemoconcentration and a subnormal temperature. The abdomen was distended and a tender, palpable mass was present in the right upper quadrant. The serum amylase was 56 Somogyi units. He was treated conservatively. The following day the temperature was elevated and the leucocyte count had increased from 13,850 to 19,100 per cu. mm. The pulse was rapid. Cholecystostomy was carried out for gangrenous cholecystitis. He improved for several days, and had resumed oral feedings. On the eighth post-operative day he vomited, had a sudden drop in the blood pressure, and died. Postmortem examination revealed acute necrotizing pancreatitis with gangrenous cholecystitis without stones.

Bockus states that a serum amylase which exceeds the top level of normal by five times provides fairly reliable evidence of the presence of acute pancreatitis.⁴ Serum amylase usually attains its maximum level within 12 to 24 hours following the onset of the disease. Ordinarily, it returns to normal within a few days and prior to the time that the clinical symptoms have begun to subside. Serum lipase values may remain elevated for a longer period. Serum amylase may be elevated by opiates.³¹ Other disease processes within the upper and lower abdomen may be associated with an elevated serum amylase, particularly peritonitis.^{32,28,21,33}

The level of the amylase within the peritoneal fluid may be above normal. It can persist at an elevated level for four days or longer after the blood serum amylase has returned to normal.²² This observation is significant as peritoneal tap may prove helpful in establishing a diagnosis, where confusion exists.

Case 5: N. B., a 39 year old male, entered St. Luke's Hospital with a history of epigastric pain of 24 hours' duration. There was marked abdominal distension. The abdomen was explored and acute hemorrhagic pancreatitis found. Cholecystostomy and drainage of the abdomen was carried out. The abdominal fluid amylase was 1,024 Somogyi units. The following day the serum amylase was 64 Somogyi units.

Hyperglycemia and glycosuria are common findings. Albuminuria develops in most patients with this disease. Low levels of serum calcium may be associated with pancreatitis. Such findings indicate extensive necrosis of the pancreas and a guarded prognosis.¹¹

X-ray examinations of the abdomen will show

on many occasions a localized ileus or sentinel loop of distended, gas filled small bowel in the upper abdomen.^{19,25} Generalized ileus often is present, when the disease is severe in type. X-ray examination of the chest may reveal a confusing pleuritis or pleural effusion in the lower lung fields.^{1,6,7,27}

Alterations in the electrocardiographic tracings are not uncommon in patients with acute pancreatitis. These changes are due to electrolyte disturbances.^{17,36} Such findings can add to the difficulty in establishing a diagnosis in a patient with cardiac disease.

Case 6: S. M., a 60 year old man, who had suffered two previous attacks of coronary thrombosis, entered St. Luke's Hospital with severe chest pain of 18 hours' duration. He was cyanotic and in shock and his oral temperature was 102.4°F. Electrocardiographic tracings were suggestive of another coronary thrombosis. He died the day of admission. Postmortem examination revealed acute calculus cholecystitis, a common duct stone, a stone in the duct of Santorini, and acute hemorrhagic pancreatitis. No evidence of recent coronary occlusion was found.

DISCUSSION

This report deals with acute pancreatitis encountered at St. Luke's Hospital, Chicago, a voluntary metropolitan teaching institution. It covers 60 consecutive patients. Diagnosis was established by significant amylase elevation, operation, or postmortem examination. Twenty-four patients were females, and 36 were males. The ages ranged from 24 years to 79 years, with an average of 51 years.

Twenty-one patients, one-third of the total, gave evidence of previous gall bladder disease. Two patients had a history of previous attacks of acute pancreatitis. One, a physician, had undergone drainage of the abdomen for acute hemorrhagic pancreatitis five years previously. He had been well during the intervening years. He developed a second attack of acute hemorrhagic pancreatitis. Exploration and drainage of the abdomen was carried out. He died the same day. Postmortem examination revealed acute hemorrhagic pancreatitis.

Acute cholecystitis was found in association with acute hemorrhagic pancreatitis at postmortem examination in three patients. These associated findings were not suspected by the attending physician prior to death. Each of these patients was treated conservatively for acute pancreatitis on the basis of the markedly elevated serum amylase determination.

Eight patients having associated gallstones had subsequent cholecystectomy. Correction of biliary tract disease, following an attack of acute pancreatitis, should be carried out after a safe interval of time has elapsed. Subsequent attacks of acute pancreatitis are less common when definitive biliary tract surgery is carried out.

Seven patients died and five recovered following surgery for acute hemorrhagic pancreatitis. This is a mortality rate of 58.33 per cent. All of the patients had acute hemorrhagic or necrotizing pancreatitis.

Eight patients developed acute hemorrhagic pancreatitis following biliary tract or gastric surgery. Six of the eight patients died. We stressed the lethal character of acute hemorrhagic pancreatitis in the postoperative period in a previous report.⁹

Forty patients with a diagnosis of acute pancreatitis did not undergo surgery. Nine patients died. The diagnosis, as confirmed at postmortem examination, was acute hemorrhagic or necrotizing pancreatitis.

The time interval between the onset of symptoms and death has shifted. Formerly, many patients were admitted in extremis and died shortly after admission. Currently, some patients seem to be successfully carried over the shock phase of acute pancreatitis, but die of complications at a later date.

Case 7: J. M., a 42 year old male, gave a history of gall bladder disease and jaundice. Cholecystectomy and removal of a common duct stone were carried out. Drainage of the common duct was established with a long arm T tube. Fulminating acute pancreatitis, manifested by a markedly elevated serum amylase, developed on the second postoperative day. He survived the initial shock period and seemed to be recovering, when death suddenly occurred on the 31st day after surgery. Postmortem examination revealed gangrenous pancreatitis and erosion of the splenic vein with extensive hemorrhage.

Case 8: E. W., a 49 year old man, entered St. Luke's Hospital complaining of severe abdominal pain. He had abdominal distension and tenderness in the upper abdomen. Serum amylase was 128 Somogyi units. The urine showed 100 mg. of albumin. The oral temperature was 101°F. The blood count showed marked hemoconcentration. Exploration revealed acute hemorrhagic pancreatitis and a distended gall bladder containing stones. A cholecystostomy with removal of gallstones and drainage of the lesser peritoneal space were performed. He progressed well until the 16th postoperative day, when severe shock developed. The rectal temperature rose to 106.6°F, and death followed. Postmortem examination revealed a necrotizing pancreatitis with ab-

scuss formation. Hemolytic staphylococcus was cultured from the abscess.

The principle of conservative treatment demands careful observation of the patient, as well as aggressive measures of therapy. Shock must be treated adequately and vigorously. Pain must be relieved and the deficiency in electrolytes, blood volume, and fluids corrected. Morphine should be avoided because it can produce spasm of the sphincter of Oddi. Demerol® is the drug of choice and it can be given intravenously. Fractional epidural block has been found useful in pain control. Hemoconcentration may be severe because of the extravasation of blood and serum into the retroperitoneal area and the peritoneal cavity. Vomiting will add to the dehydration and electrolyte imbalance. Large amounts of human plasma and serum albumin are needed to correct the deficit in the blood volume.

Efforts should be directed at diminishing active pancreatic secretion. This can be accomplished by nasogastric suction and withholding of food and water by mouth. Gastric juice stimulates pancreatic secretion. Anticholinergic drugs are helpful in inhibiting gastric and pancreatic secretions. Antibiotic drugs should be used freely in an effort to combat secondary infection in the devitalized tissues.

Surgery should not be withheld when a patient who is under careful observation develops evidence of other acute abdominal pathology. The pathology for which surgery may be indicated includes acute gangrenous cholecystitis, perforated peptic ulcer, and intestinal obstruction. Prompt surgery is essential if there is evidence of pancreatic abscess. Delay of surgery can result in erosion of large blood vessels or adjacent viscera.

Massive hemorrhage is not uncommon in acute hemorrhagic pancreatitis, at any stage of the disease. In seven of the 22 deaths in this series, hemorrhage contributed significantly to the fatal outcome. The danger of delayed hemorrhage has been stressed by Kirby et al.,²⁴ and by Paxton and Payne.³⁰ Kirby has suggested debridement in patients having smoldering acute hemorrhagic and necrotizing pancreatitis. We have observed massive hemorrhage from the bowel, with a transverse colon defect demonstrated by X-ray, following acute hemorrhagic pancreatitis. The lesion in the colon disappeared spontaneously after a short interval of time.

Case 9: L. F., a 53 year old man, entered St. Luke's Hospital with severe upper abdominal pain, vomiting, and shock. He had recently recovered from serum hepatitis, with coma, after an illness of eight months. The oral temperature on admission was 100.6°F., and the leucocytes numbered 16,500 per cu. mm. Serum amylase was 328 Somogyi units. Fever and tachycardia persisted into the third week. Six weeks after the onset of the illness, a pancreatic abscess was drained. Hemolytic staphylococcus was cultured from the abscess. This organism was sensitive to Terramycin,® which was administered. Fluid developed in the left pleural space and was repeatedly aspirated. Eleven weeks after admission, shortly before his anticipated discharge from the hospital, a severe hemorrhage from the bowel occurred. Blood transfusions were given and the colon examined by X-ray, which revealed a filling defect in the descending colon. X-rays taken several months later showed no evidence of the lesion.

Many surgeons have reported similar colon lesions.^{16,34} Occasionally, a segment of colon becomes gangrenous, requiring resection. Some of the colon defects persisted as residual constricting lesions. Such pathological changes in the bowel are in all probability due to tryptic ferments.

Case 10: C. A., a 47 year old female, entered St. Luke's Hospital with acute abdominal pain and a tender, distended abdomen. Jaundice was present. The urine contained 50 mg. of albumin. The red blood cells numbered 7.6 million per cu. mm. and the hemoglobin was 21.1 gm. per 100 cc. The rectal temperature ranged from 103 to 105°F. Conservative treatment was carried out. She died on the third hospital day. Postmortem examination revealed a dilated common bile duct without stones, a common biliary-pancreatic ampulla, acute hemorrhagic pancreatitis with massive hemorrhage into the lesser peritoneal cavity, and a segment of gangrenous sigmoid colon.

SUMMARY AND CONCLUSIONS

1. Early hospitalization and aggressive non-operative treatment of the patient with acute edematous pancreatitis may prevent the disease from progressing to the hemorrhagic and necrotizing type.

2. The more serious type of pancreatitis, hemorrhagic and necrotizing, continues to carry a high mortality rate, irrespective of the method of treatment.

3. We have experienced the transition from surgical treatment to conservative treatment of acute pancreatitis. The prevailing opinion for conservative treatment is dominant. One may be criticized when surgery is suggested in the patient having acute abdominal pathology, when the serum amylase is elevated.

4. Surgery should not be postponed when there is a question of the presence of other acute abdominal pathology, despite an elevated serum amylase. Evidence of progression of the disease to abscess and necrosis are indications for surgical intervention. Secondary hemorrhage may contribute to death, due to erosion of large blood vessels adjacent to the pancreas. Surgical debridement of necrotic tissue may prevent this complication.

5. The etiological basis of acute pancreatitis is equivocal. A single method of effective treatment will not be evolved, in all probability, until the etiology is established.

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Myocardial infarction in the negro

Reports indicating a lower incidence of myocardial infarction in the American Negro are numerous. In 866 necropsies of army men between 18 and 39 years of age in which coronary artery disease was found, 7.4 per cent were in Negroes, a lower incidence than the 10 per cent figure given as the proportion of Negroes in the entire army. In a U. S. army hospital with 15 per cent admissions, there were 34 patients with coronary occlusion in four years, none of whom

were Negroes. A St. Louis hospital reports a 2.9 per cent incidence of infarctions in Negroes; 6.4 per cent in whites. In a mid-southern university hospital with a 70 per cent Negro admission rate, only 51 per cent of infarctions occurred in Negroes. With Negro admissions almost twice as numerous as white, infarctions were equal in number in a hospital in the District of Columbia. *Sol Glotzer, M.D. Myocardial Infarction in the Negro. New York J. Med. July 15, 1959.*

Pharmacotherapy in Mental Illness

BENJAMIN BLACKMAN, M.D., CHICAGO

Though the tranquilizers were introduced into general use less than six years ago, the history of pharmacotherapy in mental illness began in ancient times. About the year the Pilgrims landed on Plymouth Rock, Robert Burton, an obscure Oxonian cleric, wrote the "Anatomy of Melancholy." He said the following about black hellebore:

"Black hellebore, that most renowned plant and famous purger of melancholy, which all antiquity so much used and admired, was first found out by a shepherd who, seeing it to purge his goats when they raved, practiced it upon the King's daughters and restored them to their former health. In Hippocrates' time it was so much in request that he wrote a book of it, a fragment of which remains yet. It was generally so much esteemed by the ancients that they sent all such as were crazed to the Anticyrians, where this plant was in abundance. 'Let him sail to Anticyra' was a common proverb among the Greeks and Latins to bid a mad-man to take hellebore . . . When that proud Menecrates wrote an arrogant letter to Philip of Macedon, he sent back no answer but this, 'I advise you to take yourself off to Anticyra', noting thereby that he was crazed, and had much need of a good purge."

Our modern pharmacology texts indicate that hellebore is an alkaloid, somewhat related to digitalis in action. White hellebore was used to purge upward and black hellebore to purge downward. The purpose in both cases was to clean the body of a certain humor known as black bile, believed by all to be the cause of melancholy.

When Pinel inaugurated his humane reforms following the French Revolution—he called it "moral treatment"—drugs were used sparingly

and a kind of psychotherapeutic approach was fostered which gave birth to our now highly specialized, modern forms of hospital treatment, currently labeled milieu therapy. Benjamin Rush, on the other hand, took the position that mental disorders were diseases of the brain, described the pathology as an "overdetermination of blood to the brain", and hence prescribed such physical treatments as purging, emetics, and bleeding.

There was a legend in those days that physicians carried a little black bottle containing medicines they could use to sedate noisy patients. Today we know that this bottle contained chloral or bromides, which became popular in the late 1800's. Later, barbiturates were added to the list of useful sedatives and by 1930, the prolonged sleep treatment and sodium amytal interview had been introduced.

About 1952 clinical studies in France led to the discovery of a group of drugs that introduced the newest phase of pharmacotherapy in mental illness, the tranquilizers.

The difference between tranquilizers and other sedatives is simply that tranquilizers do not produce clouding of the sensorium. They act principally by reducing internal tensions and neuromuscular tonus. Patients who are treated with these drugs may continue to hear their hallucinations essentially unchanged, but the distress produced by them will be markedly reduced. Hopefully, the relief afforded by this treatment will enable the patient to free himself of the vicious cycle of regression, hallucinations, further regression, and so on to gross decompensation. Freed of the destructive progression of his illness, the patient experiences less anguish, is less intent upon carrying out his hostile impulses, and can cope better with his inner turmoil and perplexity.

The tranquilizers may be divided into four groups as follows:

*From the Department of Neurology and Psychiatry, Northwestern University Medical School, Chicago.
Read before the Bureau County Medical Society, Princeton, Illinois, October 14, 1958.*

1. Phenothiazine derivatives such as chlorpromazine and promazine.
2. Rauwolfia derivatives such as reserpine and deserpidine.
3. Diphenylmethane derivatives such as benactyzine and azacyclonol.
4. Muscle relaxants of mephenin-like action such as meprobamate and phenaglycodol.

The most obvious response to the phenothiazine derivatives is a relaxant effect, varying from slight easing of tensions to gross inhibition of emotional expression. It is unrelated to the underlying nature of the excitement, whether schizophrenic, manic, or confusional. The indications for the use of these drugs does not depend upon the presence of a particular psychiatric entity but primarily upon a variety of disturbed psychic states such as psychomotor overactivity, impulsiveness, aggressive outbursts, and destructiveness. These symptoms often are dramatically improved and consequently enhance the patient's capacity to reintegrate his thinking processes and participate more meaningfully in a therapeutic relationship.

The second group of tranquilizers, Rauwolfia derivatives, are products of the plant, Rauwolfia serpentina, indigenous to India and known there for centuries as the "insanity herb." They had been used in that country for a variety of diseases but their increasing popularity in the treatment of mental disease was first published in 1943 in the Indian Medical Gazette. Ten years later Dr. R. A. Hakim of Ahrnabad, India, was awarded a gold medal for his paper on the treatment of schizophrenia with a compound largely made up of this drug. Shortly thereafter, a crystalline alkaloid of Rauwolfia was studied in this country and results showed it to be an effective sedative for use in mental hospitals. Though the chemical structures of reserpine and chlorpromazine are entirely different, their effects are strikingly similar and their clinical uses are almost identical.

The study of serotonin metabolism gave rise to our third group of tranquilizers and their mode of action can best be understood by a knowledge of their experimental origins. In 1952, a series of studies were begun by Woolley and Shaw¹ to discover an antimetabolite of essential hypertension. Excess quantities of serotonin are believed to be responsible for high blood pressures. Hence, an antimetabolite well

might serve as a therapeutic antagonist to the contracting action of serotonin on smooth muscles.

Perhaps it would be worthwhile to refresh our memories as to what an antimetabolite is and how it functions. All living processes contain a number of chemical compounds vital to the existence of the organism and these compounds have been named essential metabolites. Some examples are thiamine, ascorbic acid, thyroxine, epinephrine, and serotonin. Each of these metabolites serves as a specific substrate for a special metabolic reaction. The substrate must enter into combination with an enzyme in order to effect a specific reaction and such combinations can take place only with compounds that fit each other. In the same way that a key must fit a lock to open a door, so must a metabolite enter into combination with an enzyme to effect a reaction.

An antimetabolite is a chemical compound shaped to resemble the metabolite and capable of fitting into its receptor in the same way that several keys may fit into a lock. Not all such keys will serve to open the lock, however, and so an antimetabolite can thrust itself into the lock, if you will, of the enzyme and occupy the space of the metabolite. Since the antimetabolite is ineffective, a vital reaction is blocked from taking place.

Among the antimetabolites of serotonin that Woolley and Shaw studied was lysergic acid diethylamide, or LSD. This compound is a powerful hallucinogen and is outstanding in its capacity to produce a psychiatric state in man resembling schizophrenia. Its hallucinogenic properties have since been well documented by many vivid descriptions of its effects upon both normal and disturbed individuals so that it has become a useful tool in eliciting various abnormal psychic states for study.

Because LSD is an antimetabolite of serotonin, the theory soon evolved that serotonin was essential to healthy mental functioning and that abnormal levels in the brain would interfere with psychic processes. Shortly thereafter, a new group of tranquilizers were introduced, for it was found that certain diphenylmethane derivatives could stop or prevent the so-called LSD psychosis. Prominent among these diphenylmethane derivatives was azacyclonol, though benactyzine and others also have been given extensive clinical trials. Their antihallucinogenic proper-

ties have not been very effective in most naturally occurring psychoses and they are now being used infrequently for these purposes.

The fourth and last group of tranquilizers was originally studied for their muscle relaxant and anticonvulsant properties, but when an ataraxic effect was noted during animal studies, clinical trials for this aspect of its pharmacologic effect were begun. Meprobamate and phenaglycolol were the most useful in this group and, unlike the phenothiazines, did not affect the activity of the autonomic system. Instead, they were characterized by pharmacologists as blockers of polysynaptic nerve pathways.

These pathways are theoretical conceptions that have given rise to the following description of their function. All of us maintain certain degrees of tenseness of muscles in readiness for action. Our internal organs have the same system of reflex readiness, an extremely complicated and dynamic system of awareness. In the excessively anxious person, hypersensitivity of neurones or nerve pathways is maintained as a consequence of hyperactivity of higher brain centers. The end result is that impulses coming into the neuronal pool, ordinarily not perceived, intrude themselves upon the patient's awareness in a distressing and irritating fashion. These hyperirritable impulses give rise to a multiplicity of symptoms commonly seen in the anxious individual and are considered by some to originate in overactivity of polysynaptic pathways. The blocking of these polysynaptic pathways consequently is thought to be the site or mode of action of the muscle relaxant.

Further studies investigating the precise action of these mephenesin-like drugs cast some doubt upon the degree of their physiological action. Some workers have found them to possess negligible quantities of muscle relaxing properties. If this is the case, then the clinical improvements reported with the use of these drugs is largely due to the psychological meaning of the drug rather than to its pharmacological action. The psychological meaning of medications to the patient points up the importance of this aspect of treatment in developing a therapeutic doctor-patient relationship.

In many respects, the meaning of a drug in the mind of a patient is as necessary to understand as its pharmacological actions and clinical indications. When the stresses and strains of life

become unbearable, the physician often is sought out as one who will listen to problems and counsel in matters of personal concern. From time immemorial, the family doctor has been known to be a friendly confidante endowed by the community with the role of protector of well being, healer of wounds, and comforter in times of distress.

Drugs play an important part in the execution of this role for they act as a symbol of the doctor's healing powers and curative attributes. The usefulness of these attributes depends upon the nature of the meeting between doctor and patient. Where these meetings have been constructive, reassuring, and comforting to the patient, a drug or drugs prescribed three or four times daily can reinforce and symbolize for the patient with each dose that security and assurance which the original meeting provided.

Such a technique may result in only temporary relief and some dependency upon the doctor-patient relationship, but many patients do use their physicians for this purpose with gratifying results. In this manner of approach may be found all the elements of good medical practice—namely, symptoms, such as anxiety and pain; signs, such as tremors or a worried look; examination, both physical and mental; diagnosis; and treatment, recognizing throughout that the doctor-patient relationship is an important ingredient in the prescription and will go hand-in-hand with making the prescription effective.

Many problems are not so easily treated and represent more deep-seated conflicts such as feelings of inadequacy, problems with authority, and the like. If such be the case, a careful analysis of their origins and true meaning in the current life of the patient is the most preferable and satisfactory solution. Such a working through of emotional conflicts may require prolonged psychotherapy and oftentimes an increase of tensions before a suitable solution is found.

For many patients, however, such a personality study is not feasible and a less intensive course of psychiatric care is preferred. In such cases, a supportive role might be assumed by the therapist aimed largely at encouraging and reassuring the patient in a friendly and cordial manner. It is in cases such as these that the tranquilizers find their greatest usefulness.

A word of caution is appropriate here. The

healing powers that have been described are not all-powerful, tranquilizers do not produce a magic cure of emotional illness, and medicine will continue to have its therapeutic failures. Even though we are growing to recognize the psychological import of drug therapy in association with the physiological aspects, much study still is required to elucidate the effect of one upon the other.

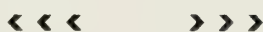
Meanwhile, the following quotation from a European psychiatrist of the last century can serve quite well to describe the present state of affairs: "It is high time that we should cease the search for the herb or salt or metal which in homeopathic or allopathic doses will cure mania, deterioration, delusions, or excitement. It will not be found any sooner than one will find pills which will make a great artist out of an ignorant lout, or a well behaved child out of a spoiled one."

These words hold true today and declare convincingly that drug therapy is not a cure-all for mental disorders. Drugs cannot repair the maladjustments, traumatic experiences, hereditary tendencies, or the thousand and one problems of life that we and our patients face every day. Only as an adjunct to a sound understanding

of the doctor-patient relationship, whether at the supportive level of the general practitioner or the more intensive levels of formalized psychotherapy, can the fruits of modern research be utilized for an improved pharmacotherapy of mental illness and the development of a new and truly beneficent psychopharmacology.

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The patient's private life

There is a high probability that illnesses of emotional etiology involve maladjustments with other persons at work, at home, or in play. Once the patient gets to talking about such situations at work, at home, and in recreational activity, the physician has a good chance to hear something significant; yet many physicians miss this chance because they feel they should refrain from invading the patient's private life. For lack

of a tactful approach to the area of personal maladjustments, diagnostically important information often is missed.

I have just suggested that in the history-taking interview, the patient be asked how his trouble has affected his way of life at home, at work, and in recreation, if he does not volunteer such information. *John C. Whitehorn, M.D. Interviewing in Medical Practice. Northwest Med. Aug. 1959.*

Aortic Valve Surgery

F. JOHN LEWIS, M.D., AND THOMAS E. STARZL, M.D., CHICAGO

AFTER successful operations had been done on the mitral valve it was logical that attempts should be made to treat aortic valve disease surgically. Though the problems have been greater here, some progress has been made. At first, blind operations were employed and a few surgeons still defend their use. The transventricular approach of Bailey¹ has been tried by many, and though it has been abandoned by its originator, others^{3,4} continue this approach with a modified, less traumatic dialator and report a decreased mortality rate. The blind transaortic approach to the aortic valve, strongly advocated a few years ago, and still used by some,⁵ is not widely employed today. As the inadequacy of these blind operations has become more apparent, and as methods for doing open operations have improved, more surgeons have studied and utilized open techniques for the aortic valve.

We have used an open, direct vision operation for over three years and can report that progress has been made both in methods that permit open surgery in this area and in techniques for altering the diseased valve. Certainly, the open approach is more rational than a closed operation, for — in contrast with blind techniques — it permits the surgeon to do a meticulous operation on the diseased valve. Success has been gratifying in selected cases and many more patients with this disease will be benefited in the future.

Methods For Open Surgery on the Aortic Valve

Hypothermia: The first successful open operations on the aortic valve were done with hypothermia and this may still be the best way to do this type of surgery in some patients. With

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the patient cooled to 28°C.—30°C. by surface cooling, or a combination of surface and intragastric cooling, the chest is opened through a transverse or midline incision and the heart exposed. After occlusion of the caval and pulmonary inflow, the ascending aorta is occluded just proximal to the innominate artery and then opened with a longitudinal incision extending down to the aortic valve. With this incision a good exposure of the aortic valve is obtained and the fused cusps may be separated accurately with a knife or scissors.

Since our first use of this technique in December 1955⁶ we have employed it on eight cases. There were two operative deaths but the other six have shown significant clinical improvement. The operation is best for congenital stenosis in which there is little or no valve calcification and here the results may be dramatic. In acquired stenosis the results may be excellent if there is only minimal valve calcification.

The limited time for the open procedure allowed by hypothermia (8-10 min.) has not seemed restrictive. There is not a great deal to do if the objective of the operation is simply to open the fused commissures accurately. This can be performed in a few minutes. Nonetheless, the short time is a serious limitation if more extensive valve revisions are to be attempted. Furthermore, with hypothermia, the heart may not pump effectively immediately after circulation has been restarted. Additional circulatory support would be desirable at this time, particularly for patients with coronary sclerosis in addition to the aortic valve disease. Recently, in order to permit more time and add circulatory support, we have used a pump-oxygenator plus antigrade coronary perfusion in three operations for aortic stenosis.

Pump-Oxygenator: The pump-oxygenator we have used is a new type of membrane oxygenator which we think has some advantages over other machines.⁷ During the by-pass the blood has

been cooled with a cooling coil to take advantage of the reduced metabolic rate provided by hypothermia.

The ascending aorta is opened to expose the valve and the necessary cusp separation then performed. Here, particularly if a longer period of inflow occlusion is to be used, some coronary perfusion is required. This has been accomplished simply by perfusing into the orifice of the left coronary artery with a cannula attached to a reservoir of heparinized blood hanging 100 cm. above the operative field. When the aortic valve procedure has been completed the heart is filled with blood or saline, theortic incision is closed, and circulation is resumed. With the pump-oxygenator, valuable circulatory support can be added during the period just after circulation has been restarted. This type of circulatory support also could be provided with pumps alone and no oxygenator. We have been exploring such a system experimentally.

Pump By-Pass: This method of doing open aortic valve surgery without an oxygenator requires two pumps. One pump by-passes the right heart and the other by-passes the left. Blood is drained by gravity from the right atrium into a reservoir and an automatic pump returns this blood to the pulmonary artery. Left atrial blood also drains by gravity into a second reservoir and the second automatic pump returns this blood into a systemic artery. Cannulation is relatively easy and with an automatic pumping system there is no problem in balancing the right and left circulations. This system may prove to be a better method for doing open aortic valve surgery than that provided by the pump-oxygenator.

It is clear that methods for allowing open surgery on the aortic valve will change and improve. Even now, good workable techniques are available and in clinical use. It would seem that the problem of what may be done to correct a deformed valve actually is a more challenging one, yet progress is being made here also.

Techniques For Correcting Deformed Valves

Surgical accomplishment on the aortic valve depends greatly upon the pathological anatomy of the particular deformity. At present, the only consistently satisfactory results are among patients with minimal valve calcification. Cases of congenital stenosis are of this type and among them results of open valve surgery have been

excellent. All that need be done is to divide the commissures accurately. Since the valve is flexible, accurate opening of the commissures will return its function to normal or nearly normal.

In some cases of acquired stenosis, especially among younger adults, the massive calcium deposits that are characteristic of the disease in older patients (60 years of age and older) have not yet developed. Division of the fused commissures may be effective among these patients and lead to an excellent result. The degree of success is inversely correlated with the amount of calcium present in the valve.

A formidable surgical problem is presented by valves with very heavy calcium, no remaining flexibility, and a small amount of regurgitation added to the stenosis. We would be inclined at present to forego surgery when the situation can be satisfactorily identified preoperatively. Special X-ray studies may be helpful in this respect. Some surgeons continue to use a blind trans-ventricular operation in these cases. Because they do not often see the results of their work, many fail to realize how little can be accomplished in this type of lesion with simple mechanical dilatation. Other surgeons are trying to excise this calcium and to make some sort of plastic reconstruction of the remaining valve. For the future, and this is the possibility that continues to intrigue cardiac surgeons, it may be possible to remove the stenosed valve and replace it with an artificial valve. Despite the tremendous amount of interest in this possibility, replacing a stenotic valve with a satisfactory artificial one has not yet become feasible. It is a difficult region in which to place a prosthesis and a valve placed accurately may not remain exactly in the same position and continue to function as it was intended to. For the present and immediate future the concept of a plastic revision of the valve tissue is more attractive than that of putting in a new valve. This concept of a plastic revision also has merit in the surgical treatment of aortic insufficiency.

Aortic Insufficiency: For insufficiency, the most attractive new idea is that of removing or defunctionalizing the noncoronary cusp to convert the aortic valve into a bicuspid structure. In this procedure the circumference at the valve is reduced by one-third, thus decreasing the area at the valve orifice to approximately four-ninths the original area. As only one leaflet is removed

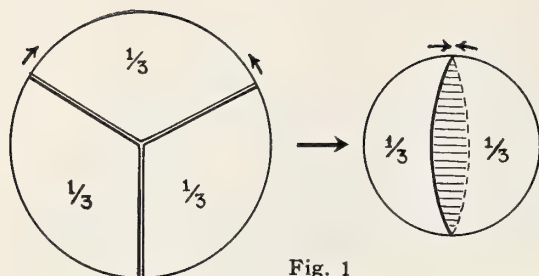


Fig. 1

Orifice area = 1

Leaflet area = 1

Orifice area = $\frac{4}{9}$

Leaflet area = $\frac{2}{3}$

Figure 1: Diagrammatic illustration of the relative changes in valve and orifice areas produced by bicuspidization of the aortic valve.

or defunctionalized, the area of available valve tissue remaining should be two-thirds of the original valve, resulting in a gain in the amount of valve in relationship to the orifice size (Figure 1). Because the ultimate anatomic deficiency in many forms of aortic regurgitation is a disparity between leaflet area and valve orifice area, this operation may have considerable applicability in treating clinical valvular insufficiency. The ideal case would be one in which the valve leaflets and the annulus are not heavily calcified.

The details of aortic bicuspidization are shown in Figure 2. A linear incision is made in the aorta and extended into the non-coronary sinus of Valsalva. Under direct vision, the annulus of the noncoronary cusp and a sliver of the adjacent aorta is removed and a bicuspid valve is reconstructed. Approximately 10 minutes of open cardiac time are required.

In experimental animals, the procedure is attended with a low mortality (less than 10 per cent). There is no immediate or delayed evidence of insufficiency. The relative aortic stenosis produced by valve bicuspidization is well tolerated. A recent report by Bailey indicates that the principle of aortic valve bicuspidization has been tested in the treatment of patients with aortic insufficiency with encouraging results.²

Importance of Accurate Diagnosis

Until the surgeon can repair satisfactorily almost anything he encounters in the aortic valve, accurate diagnosis is essential. Through the use of new and complex techniques, considerable improvement has been made in the ability to make a precise diagnosis. With combined right and left heart catheterization, a sound evaluation

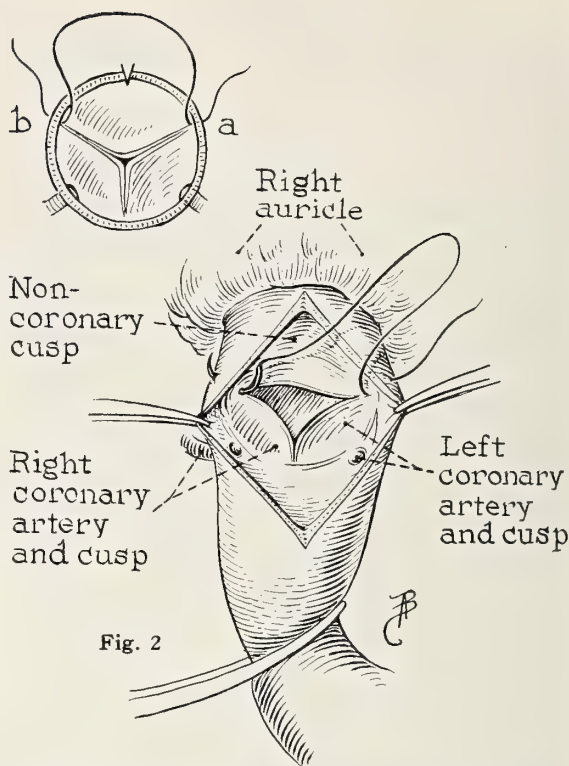


Fig. 2

Figure 2: Illustration of the technique for bicuspidization of the aortic valve. The upper figure shows a cross-sectional view of the placement of the first stitch which defunctionalizes the non-coronary cusp. The larger figure shows the actual appearance of the operative field.

of the degree of stenosis is possible. Insufficiency is more difficult to evaluate but methods for making this diagnosis are much better than they were. X-ray studies give the only method for distinguishing the amount of calcium present and these methods are now fairly reliable. When cardiac catheterization and a careful X-ray examination are added to the clinical evaluation, a sound recommendation to offer or withhold surgery can be made.

SUMMARY

1. In preference to the blind transventricular or transaortic approaches to the aortic valve, we favor an open operation that allows the surgeon to see the aortic valve.

2. There are three techniques by which open operations can be done on the aortic valve: hypothermia, pump-oxygenator, or a pump system without the oxygenator.

3. Surgery is effective in relieving congenital aortic stenosis and acquired stenosis in which

valve calcification is not heavy. At present, surgery is unsatisfactory for the heavily calcified valve.

4. For aortic insufficiency, the most promising new operation is one in which one cusp is removed to convert the valve into a bicuspid valve.

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Methamphetamine for epilepsy

Methamphetamine sulfate and probably other amphetamines should be considered as an adjunct in the management of seizure patients manifesting nocturnal epileptic attacks. A report in the literature of one patient with nocturnal seizures controlled with Benzedrine is in accordance with our observation. Since our preliminary work suggested aggravation of diurnal seizures by methamphetamine, no attempt was made either to give this drug during the day or to withdraw the previous medication, except in two cases. It was found of advantage to administer the drug just prior to the time the patient falls asleep. It has been our experience that patients with nocturnal seizures rarely complain of any disturbances in the pattern of sleep if the drug is administered in this manner.

The electroencephalographic changes in the majority of our patients, characterized by bilateral paroxysmal patterns, suggest the presence

of deep-seated epileptogenic lesions discharging to both hemispheres. We were unable, however, to distinguish any electrical abnormality pathognomonic for nocturnal epilepsy.

The mechanism by which amphetamines are effective in treating nocturnal seizures, as well as the possible pathophysiologic patterns involved in nocturnal epilepsy, were discussed extensively in our preliminary report. As more recent studies indicate, the site of action of amphetamines appears to be at the brain stem reticular activating system. It is possible, therefore, that the indirectly induced dissynchronization of electrocortical activity by stimulation of the activating reticular system by the amphetamines, produces a lighter sleep and consequently maintenance of cortical inhibition over subcortically-arising epileptic discharges. *John Logothetis, M. D. Methamphetamine Sulfate in the Treatment of Nocturnal Epileptic Seizures. Minnesota Med. March 1959.*

Varicose Veins of the Lower Extremities

E. A. SCOLLIN, M.D., SPRINGFIELD

A British surgeon called the varicose vein the Cinderella of vascular surgery, because it often is mistreated. This is not difficult to understand when we consider the basic anatomy and physiology involved. The surgical treatment of varicose veins of the lower extremities is not a simple procedure demanding only superficial acquaintance with the problem. Such a belief may lead to highly unsatisfactory long range therapeutic after effects. As a result the patient, surgeon, and referring physician are disappointed and dissatisfied and complications are all too common. With an estimated population incidence of 10 per cent (a potential 17 million in the United States), this entity deserves our attention and careful consideration.

Anatomy

As we know, the two major venous circulations of the lower extremity consist of: the superficial, or greater and lesser saphenous veins and their branches; and the second, or deep venous circulation of the leg. The latter consists of the anterior and posterior tibial and peroneal joining to form the popliteal which leads into the superficial femoral and joins with the profunda femoris vein to form the common femoral vein. Multiple branches figure importantly in subsequent surgical treatment, particularly the superficial inferior epigastric, the superficial circumflex iliac, the superficial external pudendal, and the medial and lateral femoral cutaneous veins near and about the area of the saphena femoral junction. Less well known is the third venous circulation of epi- and sub-fascial channels of small and irregular intramuscular, cutaneous, and subcutaneous veins. These are most prominent in the lower leg and about the ankle. Additionally, a fourth circulation is present, consisting of two sets of communicating or perforating veins; first, the direct perforating veins connecting the deep and superficial veins of the

leg; and the second, small indirect perforating veins connecting the small intramuscular veins and the numerous venous channels in the skin and sub-cutaneous tissues. The latter are variable in number and location and rarely are important in symptomatology or treatment. The direct connecting veins, on the contrary, are fairly definite in number, essentially constant in location, and extremely important in pathology and therapy. These are most frequent in the distal half of the lower extremity, particularly in the regions of the calf and about the ankle. Actually, the greater and lesser saphenous veins in part represent the two largest and most well developed of direct perforating veins. Following are diagrammatic illustrations of the separate various venous systems of the legs and their major and essentially constant branches. (See Figures 1, 2, & 3) Variations of major branches of the greater and lesser saphenous veins are fairly frequent and variable as are anastomoses between each of these systems, the deep, and the third and fourth venous systems as described.

Basic Physiology

Effective muscular compression and one way efficient intravenous valves are essential for return of blood from the extremities to the heart. This mechanism works effectively for the deep venous circulation of the legs but muscular compression is not applied directly to the greater and lesser saphenous veins. The superficial venous circulation of the lower extremities, so important in the problem of varicose veins and its complications, depends on difference in pressure between the deep and the superficial veins of the leg when the muscular pump of the leg muscles (especially the calf muscle) is functioning. To illustrate; when a person is standing erect and motionless, venous pressure in both the deep and superficial veins is equal and constant and represents the pressure of a column

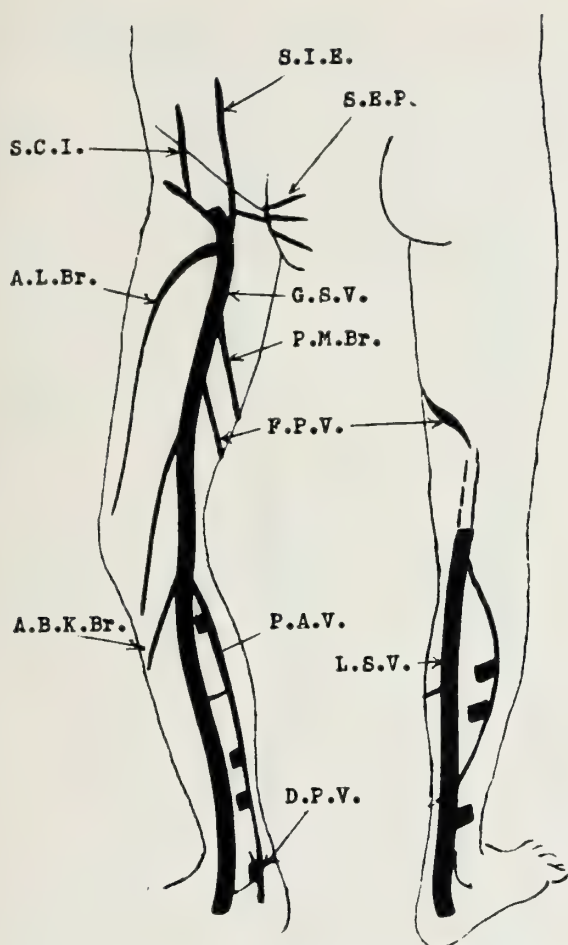


Figure 1. S. I. E.: superficial inferior epigastric; S. C. I.: superficial circumflex Iliac; S. E. P.: superficial external pudendal; A. L. Br.: anterior lateral branch; G. S. V.: greater saphenous vein; P. M. Br.: posterior medical branch; A. B. K. Br.: anterior below knee branch; P. A. V.: posterior arch vein; F. P. V. femoro-popliteal vein, L. S. V.: lesser saphenous vein; D. P. V.: direct perforating veins.

of blood of height from the heart to whatever leg level is taken. (See Figure 4) With exercise, the deep veins are subjected to frequent and intermittent pressure increases as a result of muscular contraction. Blood is directed toward the heart as a result of the pressure gradient in the leg of normally higher pressure at the foot and ankle decreasing proximally. The upward flow is stimulated also by the one direction venous valves of the deep and perforating leg veins and the intrathoracic negative venous pressure on inspiration. Between muscular contractions, a relative decrease in venous pressure in the deep veins occurs, resulting in a pressure level or force

that is lower than the venous pressure of the superficial veins at that moment. This induces a relative emptying of the saphenous venous system by suction-like action. When this mechanism fails locally, as with thrombosis of the deep venous circulation or incompetence of the valves of the direct perforating or saphenous veins, the groundwork is laid for varicosities of the saphenous venous systems with all their potential complications. The more distal the level of the perforator leak, or reverse venous flow, the greater the pressure exerted locally and the more rapidly and extensive will be the subsequent pathology.

Numerous factors have been indicated and each has merit. Heredity, in regard to structural

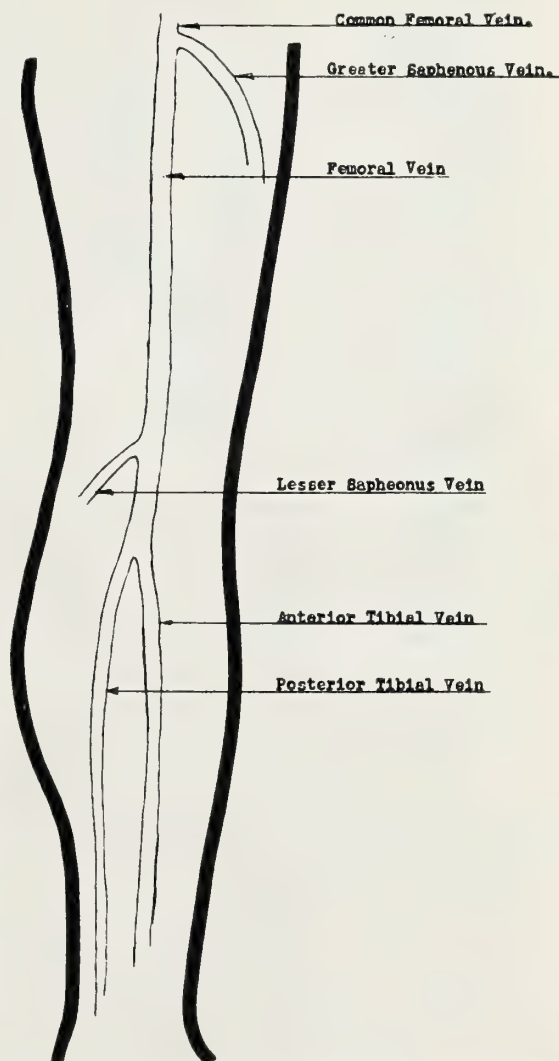


Figure 2. Superficial and deep venous circulations of the leg. (Profunda femoris vein not shown)

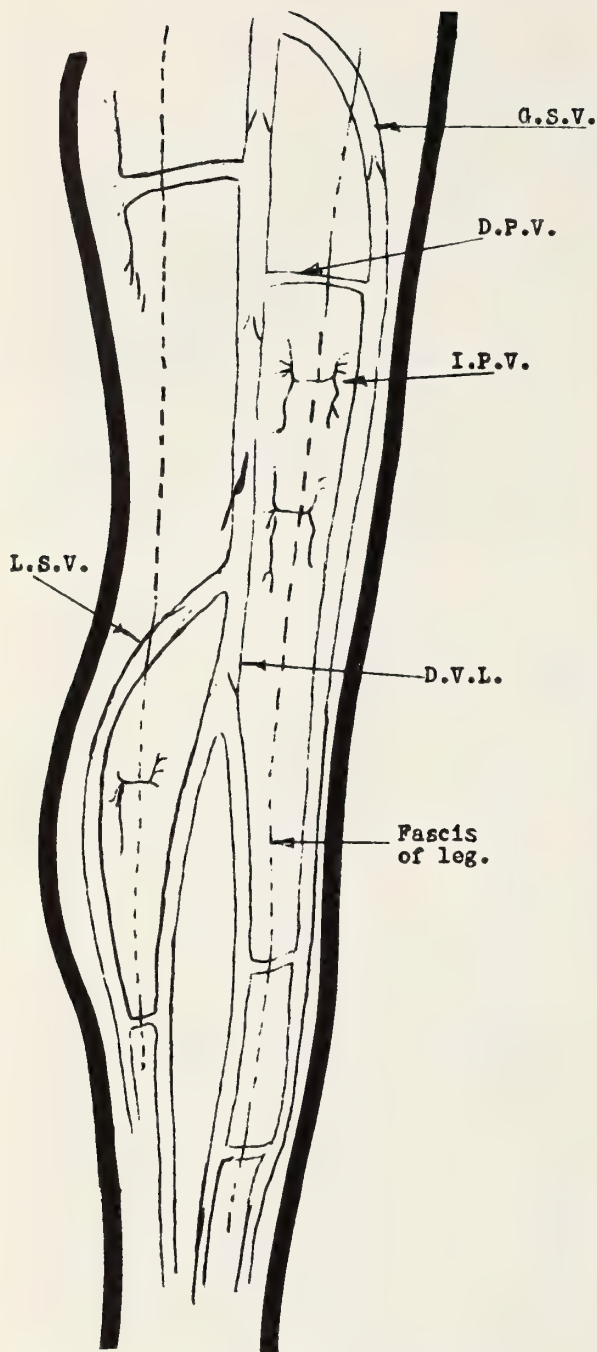


Figure 3. G. S. V. Greater saphenous vein; D. P. V.: deep perforating vein; I. P. V.: indirect perforating vein; L. S. V.: lesser saphenous vein; D. V. L.: deep veins of the leg.

strength of vein walls and efficiency of venous valves, must be considered. Local trauma, increased local pressure by way of tight garters or other constrictors, prolonged standing with minimal to no motion, and venous obstruction as by thrombosis or other similar pathologic en-

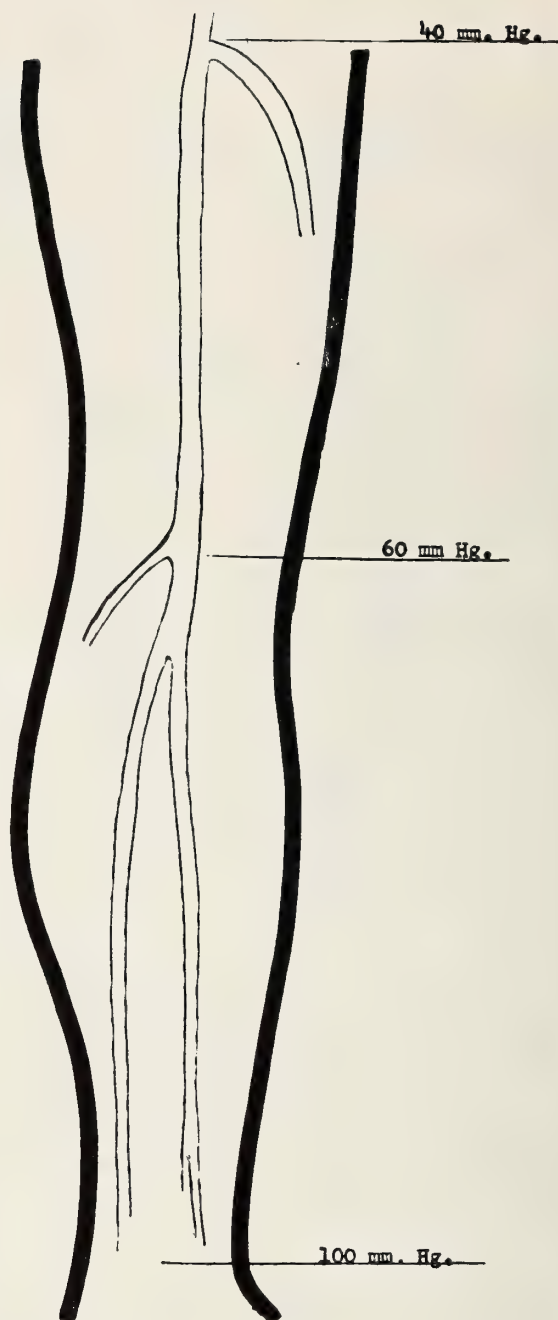


Figure 4. Venous pressures at various leg levels in both the superficial and deep veins while standing erect and immobile.

ties are all factors in initiating etiology or aggravating varicose veins. Coupled with a knowledge of the basic physiology involved, the pathogenesis becomes evident and logical. Severity of subsequent pathology will depend not alone on the initiating or aggravating factor, but also

on the area or level of the leg involved. For example; incompetent valves in the upper portion of the greater saphenous vein may cause minimal varicosities and only such over a prolonged period of time since the more distal levels of the greater saphenous vein will empty fairly adequately by open competent deep connecting venous channels distally. On the other hand, obstruction of the distal deep circulation or worse, incompetent connecting vein valves at this level, will cause extensive and marked local varicosities with severe and rapid associated local complications of cutaneous and subcutaneous edema, dermatitis, and ulceration.

Signs and Symptoms

Overt signs are obvious and consist essentially of increased single or multiple local venous dilatations, with or without associated tortuosity of the involved veins. Symptomatically, the patient may note a sensation of heaviness or cramping locally which is worse with prolonged standing and better with motion. Exception to the latter is in cases having associated complete thrombosis of the deep venous circulation. For these people, the sense of heaviness, plus any associated pain, generally is made worse by prolonged walking. Complications add symptoms and findings of cutaneous and subcutaneous ulcerations, dermatitis, local pain, local edema, phlebitis, varix rupture, and occasionally carcinomatous transformation of the ulcerated areas.

Treatment

Medical, or so-called conservative treatment is entirely palliative and indicated only when the patient refuses surgery, is unable to undergo surgery, or cannot realize the benefit of surgery. The latter unfortunate circumstance exists whenever the deep venous circulation is incompetent, as with thrombosis of the deep leg vein. The outlook for the latter is not hopeless, however. Often recanalization of the thrombosed deep venous circulation may occur and its status changes sufficiently so that surgery may be done. This type of patient should be reevaluated every six months.

The Perthe test or its modification—having the patient walk with the affected leg supported by ACE bandages or an elastic stocking for a half hour or more — will identify these patients and should be performed on all individuals with varicose veins of the lower extremity before sur-



Figure 5. Incompetence of the valves of the saphenous veins and/or the direct perforating veins may cause or result in varicosities of the main channels (superficial) or branches of the saphenous veins before the latter exhibit overt segmental dilatations.

gery is undertaken. All important to these people are elastic stockings, cleanliness, avoidance of prolonged standing and constricting clothing items, early and vigorous treatment of any and all foot and leg infections and infestations, and maintenance of warmth plus avoidance of temperature extremes. Despite these measures, many will suffer progressive disability and irreversible complications and a few will become chronic venous cripples.

I do not use injection treatment since it is at best a six month temporary expedient and is palliative only. Additionally, it carries a potential

hazard of accidental thrombosing of the deep circulation by way of connecting veins and makes subsequent definitive surgery difficult as a result of intravenous and perivenous scarring.

Surgery is the only cure for varicosities of the veins of the lower extremity, assuming operative treatment can be employed. Each of the involved circulations will be considered separately in the following discussion. Where more than one venous system is involved, surgery is extended as required.

Greater Saphenous Vein Varicosities

Total removal of the greater saphenous vein from the anterior medial malleolus approximately to its junction with the common femoral vein by stripping or dissection is essential. All intervening venous branches, where encountered and feasible, should be divided and ligated. Ligation of the greater saphenous vein at the saphena femoral junction should be flush with the common femoral vein. A review of the anatomy of the greater saphenous vein is helpful. (See Figure 1). Particular attention should be directed to isolating, dividing, and ligating all main connecting veins, where feasible. Venous channels proximal to the saphena femoral junction which may cause varices about the upper thigh, perineum, and lower buttock areas, should be treated as deep perforator veins — that is, they should be divided and ligated.

Lesser Saphenous Vein Varicosities

As with the greater saphenous vein, ligation and full stripping or dissection of the lesser saphenous vein from the posterior lateral malleolar area to its junction with popliteal vein in the popliteal fossa is necessary. Anastomosis between the two saphenous veins can and does exist by way of perforator veins or superficial veins, particularly at the calf and the posterior ankle levels. They should be dealt with by ligation and division and if these channels are excessively prominent, excision by dissection or stripping should be done. See Figure 1 for review of the anatomy of this vein and its more constant branches and perforating venous anastomosis.

Perforator Leaks

The small and multiple indirect channels are variable and relatively unimportant in respect to treatment. The direct communicating veins are fewer, more constant, and quite important as regards therapy. Knowledge of the anatomy



Figure 6. Most frequent levels of surgical intervention employed in ligation and stripping of the greater and lesser saphenous veins. Groin: above knee, medial; below knee, medial; popliteal, posterior; distal calf, medial and posterior; above ankle, medial and lateral.

involved is indispensable for intelligent surgical care of varicose veins of the lower extremity. (See Figure 1).

Lack of familiarity with these venous structures may lead to incomplete treatment and undoubtedly accounts for a good proportion of disappointing therapeutic results. Incompetence of a distal perforator vein located superiorly and/or posteriorly to the medial malleolus causes marked superficial cutaneous varicosities of the medial ankle and dorsum of the foot. This syndrome has been described by Cockett and Jones as the "ankle blowout syndrome".³ Failure to divide and ligate these venous communications where such are incompetent will result ultimately in local cutaneous and subcutaneous hyperemia, fat necrosis, dermatitis, and ulceration. Venography,

if needed, is helpful in locating all or the majority of the important direct communicating venous channels.⁵ Adequate surgical treatment of incompetent perforator veins requires division and ligations of these veins at or below the fascial plane level.

Results of complete surgical care and treatment of varicose veins should be good generally and satisfactory result figures as high as 94 per cent have been reported in the literature.⁴

SUMMARY

A complete knowledge of and acquaintance with the basic anatomy and physiology of the veins of the lower extremity are prime requisites in achieving satisfactory and efficient surgical therapeutic results in the treatment of varicose veins of the leg. This basic anatomy and physiology, etiologic factors, signs and symptoms, and a general discussion of surgical treatment of the main venous channels involved are covered.

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Auto exhaust

Probably the most publicized project in the Service's air pollution research is the study of automobile exhaust gases which is now being initiated at the Robert A. Taft Sanitary Engineering Center in Cincinnati. For this study, we are reproducing solar irradiation effects on diluted automobile exhaust gases and will expose both plants and animals to this environment. This is one of the most comprehensive studies

of the automobile exhaust problem that has ever been attempted. Since many of the substances contained in automobile exhaust gases also may be emitted during metal cleaning operations, dry cleaning, printing, and the manufacture of plastic, rubber, and other products, the yield in knowledge may be invaluable in controlling industrial health hazards. *David E. Price, M.D. Is Man Becoming Obsolete? Pub. Health Rep. Aug. 1959.*

Optimum Therapy in Coronary Heart Disease; Combined Medical-Surgical Management

M. S. MAZEL, M.D., CHICAGO

There are two reasons for adding surgical treatment to our present day medical management of coronary heart disease: 1. Despite an increase in our knowledge and a diversification of our medical techniques—e.g., the use of anticoagulants, long acting vasodilators, and psychotherapy—mortality and morbidity due to this disease continue to rise. At present, coronary disease may occur in the young as well as in deaths each year in the United States. 2. Since the prevention of atherosclerosis, particularly coronary artery sclerosis, is still an unsolved mystery, it is advisable to use presently available methods of therapy that are of proved value, whether medical or surgical, to minimize the painful or even fatal sequelae of coronary heart disease.

Clinical and Experimental Background

Diet, hereditary factors, and metabolic and hormonal interrelationships all play their respective roles in the coronary problem. Coronary the old. However, a single etiologic factor still has not been identified. Our present knowledge can be summarized as follows: The most important factors in atherogenesis are an inherited predilection to the development of atherosclerosis and a life-long diet that includes more than 40 per cent of total calories derived from fats, plus a reduction in the amount of exercise during later life. Most authorities agree that there is an elevation of the serum lipid and lipoprotein disease is the direct cause of more than 300,000 levels in patients with clinical evidence of arteriosclerosis. Also, these patients tend to have an accelerated and prolonged hyperlipemia following the oral ingestion of fats. They have Mast cell counts significantly lower than normal.

From the Departments of Surgery and Cardiovascular Research, Edgewater Hospital, Chicago.

In patients who are on prolonged 40 to 60 per cent fat diets, there is: A. an increase in blood coagulability; B. an increase in platelet adhesiveness; C. an increase in erythrocyte agglutination; D. an increase in blood viscosity; and E. a decrease in plasma fibrinolysin. We believe that one or all of these factors may be directly responsible for the production of acute coronary artery occlusion and myocardial infarction in many cases. Myocardial infarctions have been produced in rats and rabbits, almost at will, by maintaining these animals on long term 60 per cent fat diets.¹

Dietary Factors

We stress the diet as one of the important etiologic factors in coronary disease. This disease is uncommon in China, Japan, and other countries in which much of the population exists on a substandard diet low in fat and cholesterol content. However, among native Chinese and Japanese whose diets are similar to ours, the incidence of coronary disease is much higher. Similarly, among Americans of Chinese or Japanese extraction who eat the standard American diet, the incidence of this disease is the same as that of the general population. We recommend that medical management of the coronary problem begin in infancy. Children should be maintained indefinitely on a relatively low-fat, low-cholesterol diet. Parents should be educated to the fact that it is unhealthy to keep our children fat. This teaching should be carried over into adulthood. By education of the general public along the lines of dietary control, we have an excellent opportunity to practice preventive medicine in the control of coronary disease.^{2,3,4,5}

The Place of Surgery: Limitations

It is to be emphasized that surgical operation is not a substitute for medical management and is not a panacea for treating all cases of coronary

disease. Rather, it should be added to our present medical treatment before irreversible myocardial degeneration occurs. If the patient can be given the benefits of operation early in the course of his disease, and then maintained on the best medical regimen, his prognosis for reduction of anginal pain, prevention of additional myocardial damage, and for longevity will be optimally enhanced.⁶ The various medical regimens for managing patients with coronary heart disease are well known and widely applied. It is important that a skilled cardiologist supervise the medical aspects of treatment. He should be familiar with the indications, contraindications, and benefits of surgical therapy in the over-all program. In order to accept the positive benefits of the coronary operation it is necessary to state exactly what it cannot be expected to do. Operation cannot give the patient a new heart; it cannot remove pre-existing myocardial scars; it cannot alter the progression of the occlusive process in the coronary arteries; and it cannot guarantee that the patient eventually will not die as a result of his disease. These limitations are so obvious as scarcely to require emphasis. Yet, only when they are recognized, can the true result of the operation be appreciated.⁷

Electric Instability of the Heart

We have accepted and confirmed the results of work performed by Beck and his associates.^{8,9,10} The concept of electric instability of the heart points out that the most important factor in coronary heart disease is the uniformity of distribution of available blood and not the total amount of coronary artery inflow. A uniformly perfused and oxygenated heart is electrically stable, even though the total amount of coronary flow and oxygen reaching the myocardium is reduced markedly. This is demonstrated experimentally by making a dog's heart progressively and uniformly cyanotic by clamping the endotracheal tube during an open chest procedure. In such a case, the heart stops gradually in standstill. It does not fibrillate. It is electrically stable. The total amount of oxygen delivered to a completely cyanotic heart is far less than the amount delivered to a heart in which a small area of myocardium has been rendered cyanotic by ligation of a coronary artery. In the second instance, however, the presence of well oxygenated, or pink myocardium, in

contact with poorly oxygenated, or blue myocardium, results in a difference in electrical potential. Such a heart is electrically unstable and frequently will fibrillate. Patients with coronary disease often have areas of ischemia within otherwise healthy, pink, well oxygenated hearts. In certain circumstances, these hearts may develop currents of oxygen differential that are strong enough to cause ventricular fibrillation and death.

Two Types of Death: Importance of Intercoronaries

It has long been known that 80 to 90 per cent of patients with coronary disease die suddenly. These sudden deaths, referred to as mechanism deaths, are due to disruption of the normal cardiac mechanism, usually by the abrupt onset of ventricular fibrillation. Such a break in mechanism may occur with or without the actual occlusion of a coronary artery, and with or without myocardial infarction. At autopsy the majority of these hearts are found to have sufficient good myocardium to continue functioning under slightly altered coronary circulatory conditions.¹¹ If the importance of currents of oxygen differential and mechanism death are appreciated one can understand the sudden death of a supposedly healthy individual who may have only a minimal amount of coronary atherosclerosis. A small area of relatively ischemic myocardium may act as a trigger and initiate fatal ventricular fibrillation. Conversely, a small amount of red blood, delivered to such a trigger area through intercoronary channels, can be protective and prevent a fatal heart attack.

*"At the crisis of coronary artery occlusion, the fate of the patient depends upon the amount of red blood available to the myocardium beyond the point of occlusion."*¹² This axiom is fundamental in the understanding of coronary disease. Experimentally, the amount of blood available to ischemic myocardium after ligation of a coronary artery is measured by determining Mautz-Gregg backflow.¹³ Backflow is a measure of effective intercoronary anastomoses. There is excellent experimental correlation between the amount of intercoronary flow and the degree of protection of the dog's heart against fatal ventricular fibrillation or myocardial destruction, following ligation of a major coronary artery. It is reasonable to expect similar protection of the patient's heart, provided coronary artery occlusion takes place

some time after the production of intercoronary channels by surgical operation.

The complete occlusion of a major coronary artery is the prime stimulus for the production of intercoronaries. Such occlusion frequently results in the patient's death and time is not available for the development of these channels. Clinically, if a patient with adequate intercoronaries, whether pre-existing or stimulated by surgical operation, develops an occlusion of the descending coronary artery, a lifesaving transfusion of red blood can be delivered into the ischemic myocardium via anastomoses with the left circumflex and right coronary arteries. A small amount of blood, a few cubic centimeters or even drops per minute, can be protective in such a situation. Cardiopexy plus bilateral internal mammary ligation (B.I.M.A.L.) stimulates the production of intercoronary anastomoses which protect the heart against the frequently disastrous effects of a nonuniform or unbalanced coronary distribution of blood.

The pain of angina pectoris, due to ischemic myocardium, can be relieved by the surgical production of intercoronaries with resultant uniform distribution of available coronary inflow. Relief of anginal pain and improvement in work and exercise tolerance can be evaluated objectively following operation.

About 10 to 20 per cent of patients with coronary disease suffer one myocardial infarction after another until eventually there is so much destruction of heart muscle the patient dies in congestive failure. This type of death is known as muscle death. These patients have a sufficient number of intercoronaries to prevent mechanism death, as the occlusive process in the coronary arteries advances. The time interval between sudden mechanism death and gradually progressive muscle death can mean years of life to the patient. Operation offers more benefit and protection during the early stages of the disease, before the occurrence of irreversible myocardial damage.

Results of Surgical Therapy; Comparison with Medical Management Alone

To analyze the value of our procedure clinically, we studied every patient with coronary heart disease admitted to Edgewater Hospital between 1952 and 1957 and who was treated with medical therapy alone. The following fig-

ures are not true over-all mortality statistics for coronary heart disease since more than 50 per cent of patients who die due to this disease never reach the hospital.

Of 983 medical admissions, 188 patients died before leaving the hospital; 90 more died following discharge. Thus the total mortality rate in this medically treated series was 278, or 28 per cent. This is a survival rate of 72 per cent spread out over the five year follow-up study. During the same period of time, a total of 132 surgical procedures were carried out to complement medical therapy. These included 95 cardiopexies, 18 bilateral internal mammary artery ligations (B.I.M.A.L.), and 19 combined procedures (cardiopexy plus B.I.M.A.L.). Of the total number of patients who underwent surgical procedures, we have an over-all survival rate of 114 patients, or 87 per cent, for the same follow-up period as the medically treated group. We feel this difference in survival is statistically significant.

An interesting observation in our study of patients treated only medically was that Dicumarol therapy did not alter the hospital mortality significantly. However, patients who left the hospital and were maintained on long term Dicumarol treatment seemed to do somewhat better than those not treated with anticoagulants.

As a further comparison, we selected impartially 78 consecutive medical patients, admitted to the hospital during the five year study and who had suffered from angina pectoris, or who had had one or more myocardial infarctions at least six months prior to admission. These were cases that would have been considered acceptable surgical candidates. They were compared with a similar group of patients who underwent surgery. The results of this comparative analysis are seen in Table 1.

In our follow-up study, we found that most of the medically treated patients are still taking drugs and are partially or completely disabled. Patients who had combined medical and surgical management are comparatively better off. More than 90 per cent of them are well; most are working and are free from anginal pain.

In our experience, B.I.M.A.L. alone should be done in patients who are poor surgical risks if they suffer from angina and relief cannot be obtained with medical measures. If a patient is

TABLE 1

	Medically Treated	Surgically Treated
	(78 cases)	(78 cases)
Died before leaving the hospital	15 or (20%)	3 or (4%)
Died after leaving the hospital	11 or (16%)	5 or (6%)
Total Deaths	26 or (33%)	8 or (10%)
Alive	52	70
Difference in survival rate	23%	
Hospital stay (average)	30 days	10 days

a good surgical risk, cardiopexy plus B.I.M.A.L. should be performed. In our series, B.I.M.A.L. has given little protection against death as compared with cardiopexy, but it has offered considerable relief of pain in approximately 50 per cent of patients suffering from severe anginal attacks.

In our last 96 cases, there has been no surgical mortality. In the entire series, we have had only three surgical deaths which occurred early in the work in poor risk patients. There have been 10 late deaths in the series of cardiopexy procedures and 5 late deaths in the B.I.M.A.L. group.

CONCLUSIONS AND RECOMMENDATIONS

1. Combined medical-surgical management of patients with coronary heart disease gives optimum results in terms of reduction of anginal pain, prevention of additional coronary artery thromboses and myocardial infarctions, and increased longevity.

2. Medical supervision should begin during infancy and our children should be maintained on a low fat (less than 20 per cent) low cholesterol diet. This diet should be continued into and throughout adult life.

3. Once clinical coronary heart disease develops, our efforts should be directed towards arresting the progress of the disease through the use of diet, weight control, and proper medication. This therapy should be complemented by the surgical procedure that is safe, will reduce or

eliminate anginal pain, and protect the heart and life of the patient.

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Prognosis in the Cancer Patient

JAMES W. REAGAN, M.D., CLEVELAND

Evaluation of the cancer patient requires an intimate knowledge of cancer and the effects of cancer on the host. A consideration of the neoplasm and its effects on the host is of value not only in determining the course of the cancer but also in planning therapy. A neoplasm may affect the host in many different ways. Depending on its location, the lesion may press on a vital area in the brain or erode into a hollow viscus. It also may have constitutional effects. Functioning tumors of the anterior pituitary gland in children produce gigantism and in the adult, acromegaly. At times a malignant tumor will produce severe malnutrition combined with anorexia. This is more commonly observed in the presence of ulcerated and secondarily infected cancers.

In evaluating the specific effects of the neoplasm it often is desirable to know the natural history of the cancer. Their natural histories are different. The mean survival time for patients with untreated cancer of the breast is about 38 months; it is only 12 months for patients with untreated cancer of the esophagus. In addition, the survival time is more variable for tumors having a long natural history.

One of the most useful factors in determining the effect of the cancer on the host is the size of the cancer at time of detection. The smaller cancers are most likely to be circumscribed. Cancers of the uterine cervix, less than 1 cm. in diameter, seldom spread to the lymph nodes. Cancers of the breast that are less than 2 cm. in diameter have a five year survival of 74 per cent while cancers greater than 5 cm. in diameter have a five year survival of only 33 per cent.

In dealing with cancers that have spread beyond the limits of the primary growth, it is im-

portant to determine so far as possible the extent of the spread. In cancer of the breast there is a 65 per cent five year survival when only the lowest level of lymph nodes is involved while when the highest level of lymph nodes is involved the five year survival is only 28 per cent. The outlook is much better when the lesion is localized; in fact, the five year survival is twice as good when the cancer has been found in a localized state.

The type of the neoplasm also is important. Some malignant tumors such as melanoma, glioma, and certain bone tumors have a very rapid downhill course. Others, such as the basal cell carcinoma are low grade in their malignancy. We have shown recently that a keratinizing cancer of the uterine cervix has a 55 per cent five year survival while the large cell nonkeratinizing type has an 80 per cent five year survival. In contrast, the small cell malignant tumor has only a 20 per cent five year survival. Unsuspected cancer of the cervix that is detected through the use of cytology usually is of the large cell nonkeratinizing type that has a very favorable outlook.

In recent years we have become more and more concerned with the host reaction. The radiologist has been aware of this for many years in the local reaction that develops after irradiation. A good local reaction after irradiation usually means a better outlook for the patient. The presence of certain cells in the vaginal pool, known as SR cells, conveys a good reaction according to many workers. In our own work, when the normal cells of the cervix are increased in size after irradiation, the outlook is more favorable. Mast cells also may be indicative of a host response. These cells are reduced in numbers in benign tumors and are even fewer in malignant tumors. They often are observed in large numbers at the periphery of malignant tumor, suggesting a defense mechanism. Further work on the host factors in the human is justified in view of current findings.

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Summary of a talk given at the 119th Annual Meeting, Illinois State Medical Society, in Chicago, May, 1959.

Acute Lesions of the Biliary Tract

WARREN H. COLE, M.D., CHICAGO

ACUTE CHOLECYSTITIS: From the etiologic standpoint, acute cholecystitis is related primarily to obstruction of the cystic duct. The obstruction usually is caused by stone but anomalies or inflammatory bands may be responsible. Cultures are positive in only a little more than 50 per cent, indicating that the primary cause of the inflammation is chemical; any bacteria found are superimposed in the majority of cases on the chemical inflammation. Opinions differ as to whether these patients should be treated conservatively or by immediate surgery. After years of study of this problem, the author has come to the conclusion that one method is about as good as the other. If we were able to determine exactly which patient should be treated by conservative therapy (followed by cholecystectomy later) or by immediate operation, we probably would improve our results. At present, results in the two methods are relatively the same. Personally, I am willing to advise operation if I see the patient within 48 hours of onset of symptoms and the diagnosis is certain. In our hospital, only a small portion of the cases seem to fall into this category, allowing us to operate as an emergency. If the patient is being treated conservatively he must be watched closely for signs indicating perforation, when immediate emergency operation may be indicated. These signs include increase in pain, fever, and muscle spasm. Actually,

if these findings are present at the time of admission, and do not decrease within 24 to 36 hours, this failure in subsidence may be an indication for emergency operation. At operation, the surgeon will perform either a cholecystostomy or cholecystectomy. If the patient is quite ill and the gall bladder embedded deeply in adhesions it probably would be safer to perform a cholecystostomy.

ACUTE SUPPURATIVE CHOLANGITIS: This lesion is caused by obstruction of the common duct. Usually stone in the duct is the cause, but occasionally, carcinoma of the head of the pancreas or of the ampulla of Vater is causative. In general, treatment is surgical and not primarily medical with antibiotics. However, if the patient is extremely ill with chills, fever, and a high pulse rate, operation usually is not indicated at that time because of the high mortality rate. Intensive therapy with antibiotics will be indicated. If the patient's condition improves but temperature does not subside within two or three days, surgery will be indicated to prevent serious damage to the liver, including multiple abscesses. If the patient is in comparatively good condition but has high fever, chemotherapy for one or two days may be tried; but if complete response is not obtained in a day or two, operation should be carried out. Surgery consists of removing the stones and draining the common duct. Actually, when fever develops because of an obstructing stone, chemotherapy rarely will cause regression of all manifestations; therefore, chemotherapy must not be considered a substitute for surgery in these cases.

Professor and Head of Department of Surgery, University of Illinois College of Medicine.

Summary of a talk given at the 119th Annual Meeting, Illinois State Medical Society, in Chicago, May, 1959.

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CASE REPORTS



Simultaneous Gastric and Duodenal Ulcers in a 15 Year Old Boy

CORNELIUS COLANGELO, M.D., CHICAGO

Duodenal ulcer in childhood is infrequent and gastric ulcer in childhood is rare; according to Caffey such lesions seldom occur before puberty.

The coexistence of gastric and duodenal ulcer is unusual. Buckstein quotes Sturtevant and Shapiro who found five gastric ulcers in 159 cases of ulcer, an incidence of about three per cent.¹ Postmortem records of Alexian Brothers Hospital from 1930 to 1957 show three instances of combined gastric and duodenal ulcers in a total of 296 ulcers (180 gastric; 116 duodenal), an incidence of one per cent.

The finding of a gastric and a duodenal ulcer in a 15 year old boy was considered sufficiently unusual to report. While playing football, the patient completed a tackle in such a way that the heel of the ball carrier's shoe was pressed into his abdomen. The patient was shaken up, knocked breathless, and experienced mild epigastric pain that lasted half an hour. Two days later, about half an hour after the evening meal, dull epigastric pain developed and lasted one-half to one

hour. The patient went to bed at his usual hour and slept well, with no more abdominal distress. The following day he consulted the school physician who admitted him to the hospital and requested barium studies.

Questioning revealed no history of previous indigestion, postprandial fullness, nausea, regurgitation, emesis, eructation, hematemesis, melena, anorexia, constipation, diarrhea, or abdominal pain except as has been described above.

Physical examination showed an alert, healthy, well developed and well nourished white male of 15 who was beyond the age of puberty. No abnormality was noted. No abdominal tenderness, rigidity, or contusion was noted.

Two stool examinations on successive days showed a positive benzidine reaction. The blood count was normal. One urinalysis showed a trace of albumin. The barium enema was normal.

The barium meal showed a typical collar button crater one centimeter in diameter projecting from the posterior aspect of the lesser curvature of the stomach, one centimeter above the incisura angularis (Figure 1). A long shallow incisura

Radiologist, Alexian Brothers Hospital, Chicago

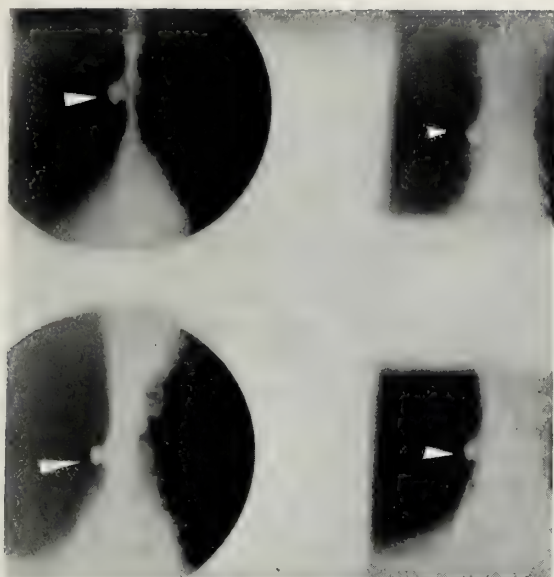


Figure 1. Arrow points to ulcer along lesser curvature of stomach in each of four spot radiograms.

indented the opposite greater curvature. There was no irritability of the stomach and it was not tender on palpation. The duodenal cap never filled solidly nor well enough for satisfactory fluoroscopic demonstration, but one film (Figure 2) showed a slitlike five millimeter long crater near its base surrounded by convergent mucosal folds.

DISCUSSION

The etiology of gastroduodenal ulcer is unknown. The behavior of an ulcer in the vertical part of the stomach differs from that of ulcer in the antrum and proximal one to two inches of the duodenum. A different etiology may be operating in ulcers occurring in these two locations.

The symptomatology of ulcer often is minimal or even absent, contrary to common belief. The rapidity with which an ulcer may appear (become symptomatic) and disappear, often contradicts the conventional description of ulcer. This is particularly true of gastric ulcer where careful X-ray study may fail to show the ulcer only five to 10 days after its initial demonstration. Such a rapid course indicates a self-limited

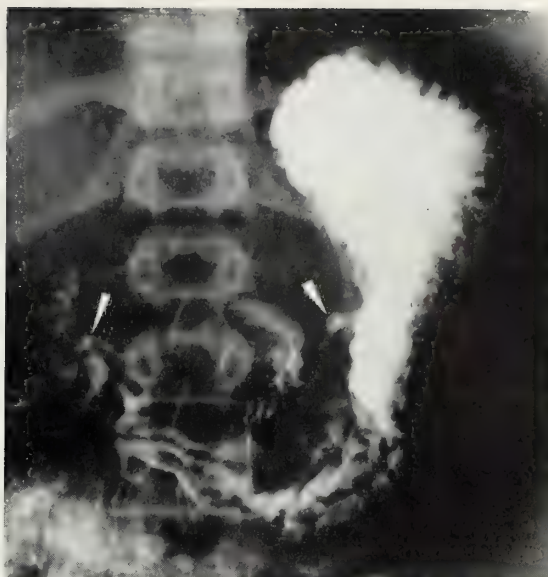


Figure 2. Arrows point to gastric and duodenal cap ulcers.

disease when the body is able to recuperate swiftly. In other instances, chronic ulcer may evolve.

The indications for barium study of the stomach in the case presented were meager. Actually, the referring physician ordered the barium examination to exclude disease caused by the trifling football injury and not because he suspected disease. Ordinarily, the physician would have observed the patient several days or weeks, reserving the use of barium studies for use in the event symptoms persisted.

The patient continued asymptomatic and was discharged on ulcer management after seven days in the hospital.

SUMMARY

Gastric and duodenal ulcers can coexist and need not produce symptoms. Barium study revealed a gastric and a duodenal ulcer in a 15 year old boy who had virtually no symptoms.

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The Use Of Megimide In The Case Of Barbiturate Intoxication

JULIUS J. WINEBERG, M.D., WAUKEGAN

The treatment of barbiturate intoxication is as controversial as is the disposition of the proverbially drunken sailor. It is not purported to enter into the pros and cons of either the anianaleptic followers of Nilsson, or their stringent opposition, but rather to describe results from the use of Megimide® in a case of barbiturate intoxication.

Megimide (ethylmethyl glutarimide) a central stimulant, was first described clinically by Shaw in 1954.¹ Shulman and Shaw in 1955 reported on the use of Megimide in 41 cases of barbiturate intoxication.² They were impressed by the rapidity with which a depressed patient was returned to what they termed a safe state—namely, one in which there was manifested a return of tendon and laryngeal reflexes along with stimulation of respiration. Megimide has the property of reducing sleeping time due to barbiturate anesthesia⁴ and reversing the normal EEG pattern of deep depression due to barbiturates.⁵ The drug is administered intravenously, titrating the patient's coma and return of reflexes against dosages ranging from 10 to 50 mg. given at 3 to 5 minute intervals, until the safe state is reached. It must be remembered that following the attainment of this safe state, relapse may occur, when treatment should be reinstituted.

In clinical usage to date, Megimide appears to be relatively safe. Boyan used 5.5 gm. on one patient without any evidence of toxicity.⁶ Perpinpanayagam has reported an infant of 15 months who took 21 grains of Tuinal® and was returned to consciousness within 24 hours after treatment with 425 mg. of Megimide.³

Early signs of toxicity are vomiting and retching, followed by twitching of the fingers, fasciculation of the jaw muscles, and finally convulsion.² Overdosage may be readily controlled by the use of fast acting barbiturates or paraldehyde.⁷

Department of Pediatrics, St. Therese's Hospital and Victory Memorial Hospital, Waukegan.

At 4:15 p.m. on April 23, 1958 a 10 year old, 90 pound boy was admitted to St. Therese's Hospital, Waukegan, following the ingestion of 25 grains of Tuinal. Physical examination revealed a comatose patient with very shallow respirations at a rate of 16/minute, pulse 86, and a blood pressure 90/60. He was unable to be aroused, all deep tendon reflexes were absent as well as the abdominal and cremasterics, his gag reflex was poor, but the pupils responded to light. There was some response to deep pain. No other abnormalities were apparent.

Intravenous 5 per cent dextrose in water was instituted immediately, and at 5:18 p.m. Megimide was given through the intravenous tubing, 10 mg. every three minutes, this dosage being increased to 20 mg. when no reaction was noted. During this period his respirations became markedly stimulated and at 5:45 p.m. he opened his eyes, responded to verbal stimuli, and appeared alert — a total of 125 mg. of Megimide having been given. At 6:15 p.m. his reflexes returned, and no further treatment was necessary. He slept for the rest of the night but was easily aroused, and in the morning he appeared normal except for nausea and vomiting.

Obviously, analeptics are no substitute for supportive therapy in cases of barbiturate intoxication; however should it be felt that it is desirable to shorten the duration of coma, and to return the patient to a reflexic state as soon as possible, Megimide would appear to be the drug of choice.

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Clinical-Surgical Conferences



Diverticulitis

**Department of Surgery
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Moderator:

ROBERT J. FREEARK, M.D.

**Director of Surgical Education
Cook County Hospital**

Discussants:

HAROLD LAUFMAN, M.D.

Associate Professor of Surgery, Northwestern University Medical School and Attending Surgeon, Passavant Memorial Hospital

JOHN B. O'DONOGHUE, M.D.

Professor of Surgery, Stritch School of Medicine of Loyola University and Attending Surgeon, Cook County Hospital

Dr. Robert J. Freeark: As the average age of the population increases, there is a simultaneous increase in the medical and surgical problems of the older age group. Notable among such conditions are diverticulosis and diverticulitis of the colon. While these lesions seldom are encountered before the age of 40, their occurrence and complications appear to multiply with every advancing decade.

These disorders were encountered infrequently by the surgeon in the past. The modern surgeon must not only give due consideration to the condition in the evaluation of acute abdominal pain but he also is plagued by a host of complications that are diagnostically baffling and technically exacting.

To know diverticulitis and its complications, and to be able to deal with it effectively in the

operating room, are accomplishments not easily attained. Our discussants today have this distinction. Dr. Harold Laufman knows diverticulitis in theory, in the laboratory, and at the operating table. His contributions to the world literature, his active participation in the experimental surgical department at Northwestern University Medical School, and his wide experience in clinical surgery assure us of a learned discussion. Dr. John B. O'Donoghue is equally qualified. A devoted and faithful member of the staff of Cook County Hospital since 1925, he has served as attending surgeon, secretary of the surgical and executive staffs, and in countless other capacities over many years. His youthful appearance belies a long and extensive surgical experience with the vagaries of this disease. We welcome his assessment of our surgical efforts in two recently encountered patients with diverticulitis.

Case 1.

Dr. Brown Brooks (surgical resident): This 43 year old obese white male entered Cook County Hospital on January 16, 1959, with a 48 hour history of abdominal pain, vomiting, and fever. Pain had begun gradually in the epigastrium and, in the 24 hours prior to admission, had shifted to both lower quadrants. Vomiting had occurred on two occasions; it was scant and blood-free in character. The last bowel movement had been somewhat loose and had occurred shortly before admission. His past history was negative for previous gastrointestinal disorders, con-

stipation, or abdominal pain. No symptoms of pre-existing or coexisting illnesses were elicited.

Physical examination revealed a well nourished man who appeared to be in moderate distress. His temperature was 101° F. rectally; pulse rate, 104 per minute; and blood pressure 160/100 mm. Hg. The significant findings were limited to the abdomen, which was flat in contour with generalized tenderness most marked in both lower quadrants. There was questionable rebound tenderness, minimal muscle guarding, and hypoactive bowel sounds. Tenderness was elicited on rectal examination, chiefly in the midline high above the prostate. The stool was positive ++ to benzidine.

Laboratory studies revealed a hematocrit of 43 per cent, and WBC of 15,000 with 75 per cent neutrophils. Urinalysis was negative. Four roentgenograms of the chest and abdomen disclosed only a minimal increase in intestinal gas, without specific pattern.

Twelve hours after admission, the physical findings in this case seemed more prominent and the patient was taken to surgery with a preoperative diagnosis of acute appendicitis. On exploration through a right paramedian incision, segmental inflammation of the sigmoid colon was identified in an area studded with diverticula.

Dr. Freeark: The patient was taken to surgery with a diagnosis of acute appendicitis. Some question must have existed in the mind of the surgeon, however, because the usual McBurney incision was omitted in favor of a right paramedian. At the time of laparotomy, the findings were those of acute sigmoidal diverticulitis. There was no evidence of colonic obstruction, abscess, fistula, or free perforation. Had the pathology been appreciated before surgery, laparotomy would have been avoided and the inflammation probably would have subsided on conservative treatment. We will not tell you what we did because we would like to know how you would have handled this problem.

Dr. Harold Laufman: We need not be ashamed of making a diagnosis of acute appendicitis in a case like this, and it was good judgment to use a paramedian incision. Too often a McBurney incision is made and then all you can do is reach beneath the abdominal wall, feel something, and know little of what is going on. With the sigmoid colon not infrequently coming over to the right side, and the appendix occasionally being present

TABLE 1
Indications for Surgery in Diverticulitis

Abscess
Perforation or permeation
Obstruction
Bleeding
Recurrent disabling symptoms
Inability to exclude carcinoma

on the left, you cannot always make a differential diagnosis between appendicitis and diverticulitis.

When you consider the pathology of diverticulitis, it is actually acute appendicitis of an appendage of the sigmoid. It behaves differently only because there are multiple appendages. The common denominator of both disorders is stasis. Impaction of fecal matter within the lumen of these saccular outpouchings of the colon is like a fecalith in an appendix. Eventually, inflammation ensues and an all too familiar chain of events begins.

The situation that confronts the surgeon in the case presented is neither rare nor easily resolved. The question of management leads us to consider the role of surgery in this disease. Let me first review the indications for surgery in diverticulitis. Perhaps we might best dispense with its well behaved twin—diverticulosis—by saying that this is rarely a medical and never a surgical problem.

Table 1 lists the indications for surgery in diverticulitis, the majority of which are self-explanatory. Little disagreement exists as to the need for surgical intervention when they occur. Many would add to this list the development of symptoms at an early age where the probability of continued and increasing difficulty is statistically overwhelming. This indication, while controversial, is perhaps applicable to the case in question.

Suppose surgical indications do exist, what procedures might be utilized? Table 2 is an attempt to list the operative procedures on the basis of whether palliation is intended or permanent cure is desired. Colostomy is a mainstay in the management of the complications of diverticulitis. Promptly and properly performed, it guarantees resolution of the inflammatory process by the simple expedient of diverting the fecal stream away from the inflamed segment of colon. Concomitant drainage of the inflamed area is

TABLE 2
Operative Procedures

Palliative procedures
Colostomy
Colostomy with drainage
Exploratory laparotomy
Curative procedures:
1—stage resection of the colon
2—stage primary resection with colostomy and subsequent colostomy closure
3—stage colostomy with subsequent resection and colostomy closure later

indicated when a collection of pus exists or is likely to develop.

When the sigmoid colon is the seat of diverticulitis, as it is in almost 85 per cent of the cases, colostomy is best carried out in the right upper quadrant and the right portion of the transverse colon exteriorized.

Exploratory laparotomy, as utilized in this case, is indicated where doubt exists as to the cause of the patient's complaints or findings.

You will notice the absence of cecostomy in this list of palliative procedures. It has no place in the treatment of diverticulitis because it fails to sidetrack the fecal stream.

Curative surgery in diverticulitis consists of removal of the inflamed segment of colon. This is ideally accomplished, at a time of election, on bowel that has been prepared both mechanically and with intestinal antibiotics. Preferably, any acute inflammation should have subsided before definitive surgery is undertaken. The anastomosis of inflamed bowel remains hazardous, regardless of the mechanical and antibiotic preparation.

As already stated, colostomy assures resolution of the inflammatory reaction. It also protects the suture line from the stresses of the fecal stream and overdistention. Consequently, curative surgery may be preceded or accompanied by colostomy that is closed at a later stage when the integrity of the anastomosis is well established. Hence, curative surgery may necessitate one, two, or three separate operations before a successful outcome can be assured.

Let us now consider the 43 year old man who confronts us this morning, in his first attack of diverticulitis. Other than his relatively young age, he may not need curative surgery at the stage of the disease he is in. Yet if nothing is done at the time of laparotomy, can we be sure he will not go on to obstruction, perforation, or even abscess formation for which some surgical

Table 3
Criteria for Primary Resection and Anastomosis

1. Patient in good condition
2. Uncomplicated diverticulitis with no bleeding
3. Flexible distal segment
4. Absence of excessive proximal dilatation
5. No evidence of fistula
6. Good preparation of the colon

procedure will be required? Should we anticipate these difficulties, perform a transverse colostomy, and commit the patient to subsequent resection and colostomy closure? Should we commit him to three operations when medical management alone might provide a cure? Or should we deal boldly with the man's problem and attempt to eradicate it now in a single operation, and free him of this condition and its complications once and for all. Such a one-stage resection seems unwise and unduly hazardous. The criteria for a one-stage resection are not fulfilled by this case (Table 3). His good general condition and lack of a major complication are countermanded by the omission of bowel preparation and the undoubted presence of acute inflammation in the bowel adjacent to the site of major disease.

In this patient, with what sounds like a phlegmon of the sigmoid area, I believe you have a choice between colostomy, simple drainage of the inflamed area, or closing the abdomen and relying upon medical management and antibiotics to control the present attack. Only the findings at surgery can dictate which of these courses of action to follow. I believe that simple closure of the abdomen would be my preference in this man. It goes without saying that if you elect to ever to close that colostomy without resecting the diseased bowel first. I would hesitate to commit this patient to that sequence of surgery without a better preoperative evaluation of the extent and severity of his disease.

Dr. Freeark: Dr. Laufman has correctly anticipated the pathology. The patient had a phlegmonous inflammation of a well localized area of sigmoid colon that was adherent to the posterior abdominal wall and, with the abdomen open, was readily palpated as an inflammatory mass. Dr. O'Donoghue, how would you have handled this case at the time of exploratory laparotomy?

Dr. John B. O'Donoghue: I think Dr. Laufman has evaluated this case logically and suggested what is the established method of treatment. I would agree with everything he has said.

I think this is a situation that we face frequently. Diverticulitis simulates appendicitis except that it is on the wrong side. I heartily endorse his reluctance to perform primary resection. I have lived through the era of early resection of the colon and it is difficult to forget many of the unfortunate results. We did not easily learn the lessons Dr. Laufman has discussed, but we now know that it takes a weak man to go ahead and a strong man to recognize that such a colon is not prepared for resection and that the surgeon's hand is not forced to do an early operation. Only by undertaking resection in a properly prepared colon can this surgery be accompanied with a low mortality rate.

Dr. Freeark: The temptation to perform colostomy in this case was a real one. If inflammation failed to subside, or if some other complication developed, we would sorely regret not having done colostomy. Can we be sure he will get well without it? Does not this severe attack, admittedly the first, make definitive surgery at a later date mandatory in this age group?

Dr. Laufman: I expect this patient will get well from the present attack without colostomy, but at the age of 43 and with the acute permeation, thickened wall, and palpable mass that you have described, undoubtedly he will have further trouble. If there were any evidence of colonic distention or generalized peritoneal irritation I would perform a colostomy. If not, the abdomen should have been closed and the patient prepared for definitive surgery at a later date.

Dr. Freeark: That is what was done. The abdomen was closed with the thought that we would go back in if the situation warranted it. The patient was placed on nasogastric suction, broad spectrum antibiotics, and intravenous fluids. The abdominal findings subsided over the next few days without evidence of obstruction or progression of the inflammatory process. Four weeks after surgery a barium enema study was made (Figure 1) which showed a surprising degree of involvement in view of the absence of a history of previous episodes. Would this one attack and the present X-ray picture be indications for definitive surgery at the age of 43?

Dr. Laufman: Definitely yes.

Dr. O'Donoghue: Yes, with a picture like that, surgery should be done.

Dr. Laufman: That X-ray picture does not tell you whether carcinoma is present. The radi-

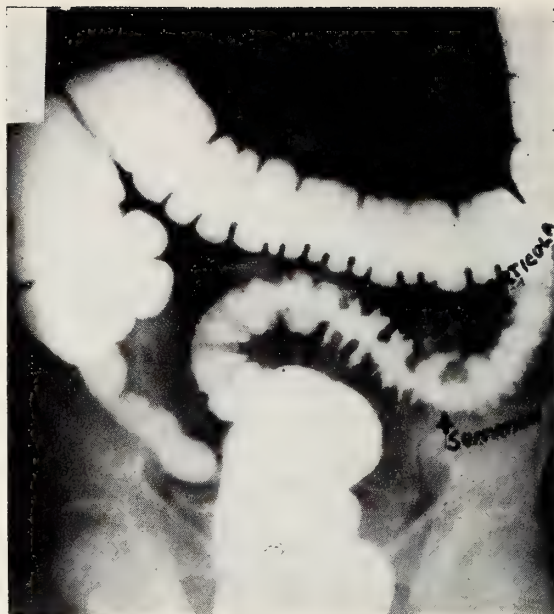


Figure 1

ologist often distinguishes between diverticulitis and carcinoma of the colon but it is extremely difficult to make this distinction. The conditions may coexist or may mimic each other in a remarkable fashion. If you have a disruption of the mucosal pattern you must consider carcinoma, but this also may occur in diverticulitis with the development of a granuloma. Therefore, a patient of 43 with these X-ray findings should be prepared for elective surgery on a planned basis. The lesion should be removed and submitted to the pathologist for immediate examination so that the surgeon knows how to proceed from that point. Surgery resolves the question of the presence of carcinoma. More important, it rids the patient of a portion of diseased bowel that almost certainly will lead to recurrence of permeation, perforation, fistula, or obstruction in the next 20 years this man can be expected to live. Diverticulitis almost certainly will lead to one of these complications in time, no matter what nonsurgical measures are undertaken.

Dr. Freeark: We have observed a number of patients in whom — at the time of laparotomy — it is difficult to distinguish between carcinoma and diverticulitis. What is your approach at the time of surgery? Can you distinguish the two on gross inspection of the colon?

Dr. Laufman: This is a not infrequent problem. Both conditions may exist as a mass in or

about the sigmoid with enlargement of the mesenteric lymph nodes. Both conditions may perforate and present with all of the characteristics of inflammation. If you are not sure, you do a limited resection, submit the specimen to the pathologist, and await his tissue diagnosis after he opens the specimen and examines it grossly. If carcinoma is present, further resection along the lines of established cancer surgery is mandatory.

Question: How long do you spend in preparing a patient for the surgery of diverticulitis?

Dr. Laufman: I am not interested in how long but how well. Preparation of the noninflamed and nonobstructed bowel is a simple matter of cleansing enemas, laxatives, and nonabsorbable intestinal antibiotics. Ordinarily, I think 16 hours of preparation with neomycin is satisfactory. Neomycin should be given the day preceding surgery, beginning at 1 p.m. After an initial dose of 1 gm. every hour for four doses, I give one gm. every four hours with the last dose at 4 a.m., if surgery is scheduled for 8 a.m. Ordinarily, this program is satisfactory. But if there is marked narrowing of the bowel with dilatation above, I provide more preparation by utilizing two antibiotics and a longer time interval. I do not believe in prolonged neomycin therapy because of the possibility that resistant bacteria may develop. Therefore, where complications exist, I would proceed with a nonabsorbable sulfa preparation for five days prior to surgery and then neomycin preparation during the 16 hours immediately before surgery.

Dr. Freeark: In your experience, how long is required for subsidence of the inflammatory process in the colon? Is this not greatly accelerated by a proximal diverting colostomy?

Dr. Laufman: Colostomy unquestionably hastens resolution of the inflammatory process. The decision as to when a colon is no longer inflamed and is ready for surgery depends upon the clinical course in the individual patient. I think in your patient I would give him weeks to subside and not embark upon curative surgery at too early a date. He should remain hospitalized until all signs of inflammation are absent, and at a later date he should be prepared leisurely for surgery. As to the time of definitive surgery, if you are unhappy with the condition of the proximal and distal bowel you are anastomosing,

you can perform a colostomy proximal to the anastomosis and protect your suture line. This two-stage procedure is a valuable solution when surgical intervention has been carried out prematurely.

Dr. William T. Meszaros (Director, Diagnostic Radiology): I think in the vast majority of cases radiographic examination will distinguish between carcinoma and diverticulitis. Where this is not possible, the radiologist will say that he cannot rule out the possibility of carcinoma. However, if the radiologic examination is performed with care, the conditions usually can be diagnosed accurately.

Case 2.

Dr. Richard Grossman (surgical resident): This 67 year old white male entered Cook County Hospital for the first time in February of this year with the chief complaints of fever, chills, low back pain, and the passage of air while urinating. The past history, supplemented by a review of the patient's records at an outside hospital, revealed a similar episode in 1953 for which he had undergone right transverse colostomy, resulting in prompt relief of symptoms. Colostomy closure was carried out in 1956. One month after closure his complaints returned, necessitating reinstitution of fecal diversion by means of a second transverse colostomy. Again in 1957 an attempted colostomy closure was made, but when pneumaturia recurred the patient was referred to the Cook County Hospital.

Physical examination and laboratory studies confirmed the presence of a severe urinary tract infection. There were no gastrointestinal complaints or significant abdominal findings. Barium enema failed to demonstrate a communication of the sigmoid with the bladder but it did confirm the presence of numerous diverticula throughout the colon. In the area of the mid-sigmoid, a long irregular segment of constriction was noted.

Dr. Freeark: This man is still awaiting definitive surgery. He underwent a third transverse colostomy shortly after admission. We think he is a classic example of the difficulties that occur in a patient with diverticulitis when the urinary tract becomes involved. Renal function remains satisfactory. However, the pyuria was resistant to therapy, in spite of performance of a diverting colostomy.

Dr. O'Donoghue: I am going to turn this into

a double play. I will touch second and toss the ball to Dr. Laufman. His experience and writings on the problem of fistula to the urinary bladder make him particularly qualified to discuss this complication.

I would like for a moment, however, to go back to the basic mechanics of this peculiar disorder of the colon. I think of diverticulosis of the colon when I watch a band go playing down the street and note the state of the trombone player's cheeks. The peculiar outpouchings of the mucous membrane of the colon almost certainly result from a similar increase in the intraluminal pressures. That many years are required for this blowout is attested to by its infrequency before the age of 40. Its occurrence in the left colon or hind gut is readily appreciated because the solid nature of the stool in that area provides mild prolonged colonic obstruction. Constipation is more often a forerunner than a complication of diverticulitis. These diverticula occur in the transverse colon and occasionally on the right in the ascending colon. Here their picture is more bizarre and unpredictable.

There is an additional factor in the preponderance of diverticula in the sigmoid region and this deals with the blood supply to the large bowel. The sigmoid colon is well endowed with vessels that penetrate the muscular layer to enter a submucosal plexus. It is just at this weak spot in the muscular wall of the bowel through which the mucosa herniates so that on the left side in the area of the sigmoid we have a sluggish, lazy piece of bowel with a dry and formed stool and numerous blood vessel perforations to favor the development of diverticula. We might envision a Polish sausage that is secured at both ends and squeezed firmly in the middle. The casing which contains the meat stretches up to a point and then something has to give and it blows out. Similarly, the gut will stretch up to a point and if there is an area of spasm or constriction and peristalsis is determined to overcome this obstruction, herniation or perforation are logical consequences. The resultant diverticulum is composed of mucous membrane covered only by serosa and usually it is in close proximity to a penetrating artery or vein.

This is a disease that has no one characteristic pattern. There is no die made for it. A person may have a number of diverticula scattered throughout the entire colon, or they may

be concentrated in a small three or four inch segment. The mouth of each diverticulum may be wide, with free flow of fecal matter in and out; or it may be narrow, with consequent stasis and impaction.

I want to remind you that the degree and kind of pathology present in the complications of diverticulitis are extremely varied. Much depends upon the size of the diverticulum, the bacterial flora within its lumen, and the resistance of the patient to mild infection. The adjacent vessels may undergo arteritis or phlebitis, and infection may be carried to the liver by the inflamed veins or lymphatics.

The course of a given attack of diverticulitis is made up of countless variables beyond the predictions of even the most astute clinician. Involvement of the sigmoidal loop is extremely variable. The first segment of this loop goes to the left, the next to the right, and the last behind the bladder. When perforation occurs in the first loop, abscess may result. When it occurs lower down, localized abscess or generalized peritonitis may ensue. Down in the pelvis, the development of a fistulous communication between the bladder and the sigmoid is an understandable consequence.

Besides their acknowledged place as a source of disease, these diverticula may plague the surgeon in other ways. I have seen three cases of acute peritonitis with free air in the abdomen and a shocklike picture suggestive of perforated peptic ulcer. On exploration I encountered an abdomen filled with feces, with an obstructing carcinoma of the left colon that blew out a diverticulum of the proximal transverse colon. Such a free perforation of a diverticulum is different from the rupture of one in the sigmoid where the presence of numerous other diverticula is more likely to produce a protective wall against the expansion of the inflammatory process.

It has been said that 10 per cent of the population has diverticulosis and I would suspect that in people over 60 the figure is much higher. Dr. Meszaros has said that X-ray diagnosis can be made, and I would agree that in most cases careful roentgen study is indicated and can be relied upon. Barium enema usually is all that is required. Air contrast study is a good procedure for the diagnosis of polyps but can be dangerous when numerous diverticula are present.

Our experience with neglected diverticulitis

is not a happy one and leaves little doubt of the need for early, well planned, and well executed surgery.

Let us once again turn to Dr. Laufman for some advice on the problem of fistula formation.

Dr. Laufman: In this case you could hardly ask for a more graphic illustration of the teaching that once diverticulitis necessitates colostomy, that colostomy cannot be closed until the diseased segment of colon is removed. You cannot heal a fistula from the sigmoid to the urinary bladder permanently by diverting the fecal stream. You may get inflammation out and calm the area down and you may have difficulty in demonstrating the fistulous tract by either the colonic or vesical route. But I do not think the tract will close up and stay closed when that fecal stream returns. The surgeons who cared for this patient prior to his admission here erred in their attempts to re-establish intestinal continuity. You must do definitive surgery. You must resect the diseased bowel and the fistula and then re-establish continuity to the rectal stump. There are a few cases reported of bladder involvement by diverticulitis in which abdominoperineal resection was required but in most instances you should be able to re-establish continuity and preserve the sphincter mechanism.

This case is not, therefore, an example of recurrent diverticulitis or recurrence of one of its complications. Recurrence of diverticulitis after a direct surgical attack upon the diseased colon is unusual but it occurs. If we keep in mind certain principles of surgery in dealing with this disease, recurrence in any form should become virtually nonexistent. The causes of recurrence following surgical excision in diverticulitis are chiefly inadequate resection of the bowel and the recurrence of anastomotic strictures.

How much bowel to remove in a case of diverticulitis is not easily answered. Diverticulosis may involve the entire colon, and it is at times difficult to find a portion of bowel free of diverticula that may be preserved for anastomosis. Experience has shown, however, that it is neither necessary nor desirable to remove all of the diverticula laden bowel. If you resect a 10 to 12 inch segment of colon, and include in that specimen all the diverticula that give evidence of inflammatory reaction, the patient will be cured. Di-

Table 4
Causes of Anastomotic Strictures

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1. Anastomosis of inflamed bowel
 2. Closed anastomotic techniques
 3. Use of two layers of continuous sutures
 4. Leakage of the suture line
 5. Prolonged dysfunction of the left colon
-

verticula that remain in situ seldom give symptoms, possibly because the resultant straightening of the sigmoidal curvature discourages stasis in the remaining colon.

Table 4 lists the causes of anastomotic strictures in diverticulitis. Many of them apply to intestinal anastomoses in general, while others are peculiar to diverticulitis. The selection of noninflamed bowel for anastomosis deserves mention. If you discover that the area selected for anastomosis is not soft and you are reluctant to go back and mobilize more bowel, you must remind yourself of the importance of this principle.

Closed anastomotic techniques cause more recurrences than anything else. Do such anastomoses open? With the closed technique you may catch the lip of a diverticulum on the opposite wall or throw a suture through a diverticulum. You must see where each needle puncture goes and I strongly urge an open anastomosis.

Two continuous layers of sutures causes strictures because of the purse string effect they create. Leakage of the suture line should not occur under good conditions of surgical technique and preoperative preparation.

Prolonged dysfunction of the left colon is a question of timing. If you do a three-stage operation, the third stage of colostomy closure should not be done too soon nor too late. Premature closure subjects the suture line to stresses for which it may not be prepared. Delayed closure leads to stenosis by virtue of the loss of dilating action of the fecal stream. In most instances, the colostomy should be closed two to four weeks after the second stage of resection.

I am reluctant to close this discussion without a word about the problem of carcinoma. If you are unable to differentiate by clinical or radiologic techniques between carcinoma and diverticulitis, you must explore the patient. Certain symptoms and findings weigh heavily in favor of one diagnosis or the other. Repetitive bleeding may occur in diverticulitis but usually carcinoma

is responsible. The occasional problem of massive lower gastrointestinal hemorrhage occurs from relatively asymptomatic diverticula. Obstruction does not occur in diverticulitis as often as with carcinoma. The failure of such medical measures as bland diet, antispasmodics, and intestinal antibiotics to relieve symptoms suggests carcinoma, as does continuing symptoms after a proximal colostomy.

Question: If cecal diverticulitis presents as an acute appendicitis how do you handle it?

Dr. O'Donoghue: The cecum has been the site of a solitary diverticulum that may be quite large. It may become obstructed and give a story like appendicitis and it should be handled just like appendicitis or Meckel's diverticulitis. If it is asymptomatic, and is encountered at the time of exploration, just as with Meckel's diverticulum it should be removed, if the patient's condition permits.

Dr. Laufman: Cecal diverticulitis is a different disease. It is congenital, on the right side of

the colon, and affects a younger age group. Sigmoidal diverticulitis probably is acquired and occurs in an older age group.

Dr. Freeark: Do you gentlemen recommend operative intervention if a cecal diverticulum is identified on routine barium study and the patient is asymptomatic?

Dr. Laufman: If the diverticulum is asymptomatic it should simply be watched. If the patient has right lower quadrant symptoms do not wait for it to explode. Go in and remove it.

In conclusion—and this is perhaps best placed at the end of our discussion—there is the question of terminology. You should know that one diverticulum is a diverticulum; two or more are diverticula and not diverticulæ or diverticuli. This has created such a dilemma that in some quarters the accepted terminology for more than one diverticulum is diverticulums and this may become official.

Dr. Freeark: Obviously, diverticulitis is a difficult disease.

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EDITORIALS



Interns, residents, and licensure requirements

An editorial in the *Chicago Tribune* of August 8 poses a query as to why Illinois "has retained an unusually small proportion of its medical students as practioners within the state." It quotes a University of Illinois study which concluded that most of the difficulty is at the point of training interns and residents. The editorial says, "Hospitals, especially in downstate Illinois, need to exert themselves to increase and make more attractive their internships and residencies."

One of the deterrents to applicants for internships and residencies in the state has been the interpretation of the licensure law by the State Board. The law requires a "satisfactory internship." The Board requires a rotating one. This last is a holdover from two situations, neither of which exists any longer. Formerly, the Board maintained quite properly that since they were responsible to the public for certifying that an M.D. could practice both medicine and surgery, he should be exposed to these and other specialties during his internship. Second, during World War II the armed services were in need of physicians who could fill multiple holes. The modern clinical clerkship and the end of the war have nullified these points.

Before World War II the law was interpreted as being permissive of the substitution of a

straight for a rotating internship. A return to this policy would result in an increase in the number and quality of applicants for internships and residencies. Undergraduate medical students who know which specialty they want frequently do not apply for internships within the state because they regard the rotation as a partially wasted year. Well trained men with straight internships elsewhere cannot now apply here because residents have to obtain licences.

Emmet B. Bay, M.D.



They don't outgrow it

Every patient with strabismus has diplopia and, to overcome double vision, he learns to suppress the image from one eye. If the child does this habitually, in the same eye, he will develop poor vision, or amblyopia in that eye. According to various investigators, from one to two per cent of the inductees in World War II suffered from amblyopia. In many cases, neglected strabismus was responsible; the parents believed the deviation would be outgrown. These defects are not outgrown without paying a penalty in terms of binocular inefficiency. With modern treatment of strabismus, amblyopia need not happen.

Binocular co-ordination does not become effective before the age of 6 months in many children. Any strabismus after this age, whether constant or intermittent, must be considered ab-

normal and worthy of further investigation. Immediate treatment may simplify later care. Recall too, that the first indication of a retinoblastoma and central chorioretinitis may be the presence of strabismus.

To prevent or overcome amblyopia, it is necessary to force use of the suppressing eye. This is accomplished by occlusion of the normally fixing eye. This is done by placing a patch over the fixing eye or through the instillation of a cycloplegic drug in that eye. When a patch is used, it is effective only if worn all day during the child's waking hours. Occlusion therapy is most effective in the preschool child and the sooner it is started, the shorter the courses required.

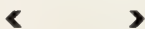
Amblyopia is common in intermittent as well as in constant deviations, and is found in esotropia, exotropia, and hypertropia. So long as amblyopia is present, efficient binocular vision cannot be attained, even though the eyes are straightened with glasses or surgery.

About one-third of all patients with esotropia may be straightened by correcting their refractive error with glasses. The use of a strong cycloplegic drug, such as atropine sulfate, is required in refracting the patient with strabismus. When glasses correct a deviation, surgery is contraindicated because invariably it results in an outward deviation of the eyes when the child reaches puberty.

With modern anesthesia, the tendency has been toward earlier surgery. About two-thirds of the children with esotropia and most of those with hypertropia and exotropia require surgery. The general feeling is that surgery should be performed before the child starts school. When strabismus has been present since birth, and is not corrected with glasses, surgery at about age 3 is advised.

Orthoptics, or visual training, is a valuable adjunct to strabismus therapy. Visual training is not designed to straighten a child's eyes but to teach him to use his eyes together more effectively, once straightening has been accomplished through glasses or surgery.

Eugene R. Folk, M.D.



Two kinds of gratitude: The sudden kind we feel for what we take; the larger kind we feel for what we give. — *E. A. Robinson*

Joint Commission on Accreditation of Hospitals

The Joint Commission on Accreditation of Hospitals began full operation on January 1, 1953. It has been praised as a voluntary effort to improve patient care in hospitals and pilloried as a bureaucratic medical Pentagon. Both its complimenters and critics agree on one thing—the program is becoming increasingly important day by day.

Mindful of its distinguished heritage in the hospital standardization program of the American College of Surgeons, the Commission has become the tool of its four member organizations in their common purpose: the improvement of patient care in hospitals. It is a service organization whose aim is to conduct an accreditation program that will encourage physicians and hospitals to apply voluntarily certain basic principles of organization for efficient care of the patient and to promote a high quality of medical and hospital care in all its aspects, to give patients the greatest benefits that medical science has to offer.

Though the function of the Commission pertains to hospitals, patient care is primarily the responsibility of physicians. Rightfully, the control of the governing board of the Commission is in the hands of physicians, and all surveyors for the Commission must be licensed physicians.

The Standards for Hospital Accreditation are not laws to govern people but principles to guide conduct. Effective application of basic principles—not fulfillment of minimum rules—is essential for the accreditation of a hospital. The standards are only initial guide lines by which each hospital works voluntarily toward constant progress and improvement of patient care. These are minimal and every hospital should try not only to meet but to exceed them. No one actually has criticised the principles on which the Standards for Hospital Accreditation are based. However, the interpretation, implementation, and methodology used in carrying out the standards has aroused controversy at times. Most of this criticism is healthy and indicates an interest and concern for the success of this voluntary co-operative effort.

No one is more aware than the Board of Commissioners and the staff that the quality of hospital patient care cannot be measured in numeri-

cal scores. Quality depends upon too many intangibles such as sincerity, integrity, motivation, tender loving care, dedication, and the art of medicine, to be measured quantitatively. What the Commission looks for are the elements in organization, personnel, and professional competence that are the potentials for good quality.

Hospitals that have failed to become accredited all had the same common faults. Leaving out brick and mortar aspects like poor sanitation and fire hazards, these deficiencies were as follows:

1. Lack of adequate medical staff organization.
2. Inadequate or no review of the clinical work.
3. Lack of proper supervision and control of clinical practice.
4. Inadequate medical records.

It is obvious that if the first is lacking, the others also will be inadequate. Many studies on different aspects of quality care in hospitals have borne out the fact that the well organized, well supervised, well controlled hospital is less liable to lawsuits, has better public relations in the community, and has a better reputation than those not so organized. To physicians, the hospital, and the community at large, accreditation has meant that all can feel that here is an institution that is maintaining and exceeding known approved standards; the work performed by all at the hospital is under constant scrutiny for improvement of quality care; and only the best is good enough for the patient.

Physicians should be proud of the Joint Commission on Accreditation of Hospitals. Here is what the Honorable Waldo Monteith, Minister of National Health and Welfare for Canada, said: "The program's achievements are important. But no way less important is the way it has been carried out. This has not been something imposed from above by government or any other authority. Hospital accreditation has been a spontaneous effort on the part of the medical profession and hospitals to put their own houses in order—to set their own ideals of service and efficiency and to translate these into practice. They have been their own conscience and watchdog. They have asked for no financial assistance from any quarter. Theirs has been an exercise in self-discipline that could well commend itself to professional groups everywhere."

Kenneth B. Babcock, M.D.

Dr. Harold M. Camp honored on 50th year as physician

Dr. Harold M. Camp of Monmouth, Secretary-Treasurer of the Illinois State Medical Society, was honored by the Warren County Medical Society and the Monmouth Medical Club, September 24. The occasion was the observance of Dr. Camp's 50 years as a physician and of service to the medical profession and to the residents of his community.

Physicians, patients, and other personal friends gathered in Grier Hall, Monmouth College, for a dinner. Due homage was paid to Dr. Camp by several speakers.

The program was arranged by Dr. Charles P. Blair of Monmouth, president of the Warren County Medical Society.

Dr. Camp, following his graduation from Northwestern University Medical School in 1909, entered the practice of medicine in Monmouth, and for many years was a busy physician and surgeon. Gradually his interest turned to organized medicine. In 1924, he was elected secretary of the Illinois State Medical Society, an office he still holds.

He served as Councilor from 1922 to 1924. He was selected editor of the Illinois Medical Journal in 1941, a position he also still holds. During World War II, he served as state chairman for Procurement and Assignment Service for Physicians under the War Manpower Commission. In June of 1958, he received a Merit Award from Northwestern University "in recognition of worthy achievement which has reflected credit upon Northwestern University and each of her alumni."

Dr. Camp is a member of the Monmouth Medical Club, the Warren County Medical Society, the Illinois State Medical Society, the AMA, and the World Medical Association. He is an honorary member of the Fifty Year Club of the Texas Medical Association.

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Let's go metric

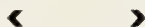
There is no country in the world like these United States where we have so many systems of weights and measures. We use the metric avoirdupois, troy, apothecary, and various splinter systems. Most medical writers report weights in pounds and grams; and lengths in feet and

meters. The material submitted to your editors is no exception.

The U. S. and other English speaking countries are at a disadvantage when dealing with the rest of the world. Advocates of the metric system point to the disadvantage in competing with the Soviet Union which uses the metric system. Scientists, accountants, and engineers are well aware of the difficulties of a multiple system.

France was the first to adopt the metric system. It is easier to handle because it eliminates fractions. Many of our top scientific organizations are backing the change. Eli Lilly and Company began a complete conversion to the metric system in 1955 and spent four years converting 2,500 manufacturing formulas. Machines and instruments were recalibrated and 10,000 employees taught to think in metric terms.

The majority of physicians use the metric system in writing prescriptions. It is time our government takes a more positive attitude and adopts a single system that eliminates chaos and will save time and money.



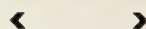
Mail order cytology

The Wisconsin State Laboratory of Hygiene at Madison has conducted a mail order cytologic screening program for uterine cancer over the past 10 years. Specimens were submitted by private physicians throughout rural Wisconsin. Upon request, a kit is sent by mail, containing the necessary materials with which to obtain, package, and return the specimens to the laboratory for examination.

Dr. William D. Stovall and Dr. Paul Calabresi¹ analyzed data on 65,163 cytologic specimens that had been examined at the Laboratory between 1947 and 1956. Malignancy was present in 805 cases, of which 750 were detected by cytologic examination. The remaining 55 cases were false negatives. The cytologic test was 96.4 per cent accurate in detecting invasive cervical cancers, 94.7 per cent of in situ cervical cancers, 92.9 per cent of adenocarcinomas of the cervix, and 85.4 per cent of adenocarcinomas of the body of the uterus. Approximately 75 per cent of cytologically confirmed cases were not clinically detectable.

¹1958 Highlights of Progress in Research on Cancer. U. S. Department of Health, Education, and Welfare, Public Health Service, National Institutes of Health, Bethesda.

It is reasonable to assume that many Wisconsin women owe their lives to this plan that is made to order for the rural physician.



Editorials from other journals

Our ambulances

Ambulances are designed and operated for the assistance of the sick and injured, not for causing disability. They are intended to save lives, not to destroy them. There has come about a tradition that ambulances are to get the patient to the hospital in the shortest possible time, at breakneck speed, no matter what the cost. The driver is motivated by the motto that speed is vital. But speed often is fatal and we can no longer put up with this popular delusion.

This thinking goes on in spite of the fact that physicians agree that there are few if any cases in their experience in which a few minutes more time spent in getting to the hospital would have made any difference in the patient's outcome.

Now we Pennsylvanians have a chance to get something done about this. The Allegheny County Medical Society was instrumental in having a bill introduced into our State Legislature that can solve the problem, at least in part. Senator Sarraf (Allegheny County) has introduced a bill (S. 808), that was suggested by the American College of Surgeons. It would regulate the operation and equipment of ambulances. It provides for the inspection of these important vehicles by the Department of Health. It also requires that operators of ambulances abide by our speed laws.

The bill has been referred to the Committee on Highways. We feel that physicians generally will favor its passage as beneficial to their patients and less likely to create new ones. *Editorial. Pennsylvania M. J. Aug. 1959.*



Council meeting minutes

The regular August meeting of the Council was held at the Hotel Sherman, Sunday, August 23, 1959, with the following present: O'Neill, Hesseltime, Hamm, Camp, Redmond, Adams, Portes, Piszczek, Blair, Endres, Reisch, DuPuy, Goodyear, Montgomery, Fullerton, Klein, Oldfield, Cross, Hopkins, Compton, Hamilton,

Dailey, Limarzi, Bennett, Scatliff, Neal, Oblinger, Mirt, and Frances Zimmer.

The minutes of the July 26, 1959 meeting of the Council were approved as mailed.

Reports of Officers

Dr. O'Neill reported as president. Because he had been in the hospital most of the time since the last Council meeting, his activities have been curtailed. He thanked the Council and the individual members for the cards and letters he received. He had been able to attend the meeting of the Committee on Aging with representatives of Blue Cross-Blue Shield, and also the meetings held on Saturday, August 22, just prior to the Council meeting. Dr. Hesseltine reported that he had attended the meeting of Dr. Cannady's committee with representatives of Blue Shield Plans in Illinois, the chairman of the Committee on Medical Service and Public Relations, and the officers of the State Medical Society. An invitation has been received from the Michigan State Medical Society to be their guest at their annual meeting September 27-October 2. It will be a pleasure to attend in the company of Dr. O'Neill as president.

State medical blank

Dr. Camp reported that he had received a note from Dr. Reichert that he would be unable to attend the Council meeting, but would request that the following report be presented:

On July 2, 1959 a letter was sent to Drs. Reichert and W. L. Crawford asking that these two physicians review and comment to the Council on a medical blank used by the Illinois Department of Public Instruction for Placement of Educable and Trainable Mentally Handicapped Children in the public schools of Illinois.

This was done at the request of Mr. Ray Graham, Director of Education for Exceptional Children. The supply of these blanks was about exhausted; the Division for Education for Exceptional Children was about to re-order them with very slight changes. One of these is the statement in the opening paragraph of the blank: This form has been approved for this purpose by the Illinois State Medical Society and its Committee on Child Health.

After reviewing the form, Dr. Reichert did not feel that he could recommend its approval by the Council. He suggested that he and Dr. Crawford meet with Mr. Graham for a discussion.

The meeting was arranged for August 13, 1959, in the Chicago office of the ISMS at 9:30 a.m. That morning Dr. Crawford notified the men that he would be unable to attend. Dr. Reichert met with Mr. Graham and a member of his staff. It was agreed that the form was overly long, contained a number of words no longer scientifically accurate, and was redundant in some areas and incomplete in others. It was decided that the form should be reorganized and condensed, that lay terms be eliminated in favor of medical terms, and that additions be made in line with recent developments in diagnosis. Mr. Graham's staff and consultants will do this and submit the new form to the Council for approval. At that time, the question of an appropriate fee for filling out the form will be considered.

No Council action was necessary, as the report was one of progress.

Chairman of the Council

Dr. Montgomery stated that he would like Council action on two recommendations:

(1) That all committee chairmen who have reports which are long, have them written up and sent to the secretary's office at least 10 days before the Council meeting so that they can be mimeographed and mailed to all Council members with the secretary's report; then, at the Council meeting, only a digest of the report need be presented.

(2) That all chairmen of committees be asked to keep attendance records of all meetings and report to the Council prior to the annual meeting so that the Chairman of the Council will have this information on hand when committee members are appointed for the next fiscal year. Members who do not attend should not be re-appointed.

MOTION (Portes-Endres) that these two suggestions be approved, and committee chairmen so notified. Motion carried.

M. S. & P. R.

Dr. Hopkins reported as chairman of the Committee on Medical Service and Public Relations. The committee met Saturday and discussed several important subjects. The legislative program undertaken by any state society should never be in the form of a crash program; sustained effort at all times results in better liaison, better understanding, and better co-operation. A year around program is not a simple

task, and to assist in the development of a sustaining interest, we have Mr. Oblinger, Mr. Scott, and Mr. Neal. The work in Cook County is extremely difficult to organize and maintain. The CMS has a legislative committee headed by Dr. Breed, and he is anxious to co-operate and to develop an outstanding program.

In connection with legislature, there was a meeting in Denver attended by representatives of the insurance industry, Blue Cross and Blue Shield, Union labor, etc. This was a regional meeting, and similar sessions are being held all over the country. The care of the aged is one of the subjects up for consideration at all these meetings. The executive director of the National Chamber of Commerce spoke of the importance of this problem at the local level. It is suggested that the state officers of the Illinois Chamber of Commerce be invited to the Springfield meeting on September 27. The ISMS holds membership in the State Chamber, and we should learn to include this group in our planning. Members are good representatives of industry and local activity.

The committee discussed the questionnaire to be sent out to the membership relative to the individual physician's reaction to a service plan for the over 65 group. It is the recommendation of the committee that the committee, working with the Committee on Aging, be authorized to hire some individual or firm to develop the questionnaire. Polling of the membership is a mandate from the House of Delegates and the work should be under way.

MOTION: (Piszczyk-Portes) that the committee be authorized to hire some individual or firm to develop the questionnaire. Motion carried.

The committee considered the resolution from Adams County relative to high school academic scholarship achievement awards. It was the opinion of the committee that this was a matter for each county medical society to decide and consider individually, and therefore the committee had no recommendation to make relative to the resolution.

MOTION: (Piszczyk-Portes) that the report be accepted. Motion carried.

MOTION: (Portes-Goodyear) that the Council give a rising vote of thanks to Dr. Percy E. Hopkins for his services as chairman of the

Committee on Medical Service and Public Relations.

IPAC

Dr. Compton reported as chairman of the Advisory Committee to the IPAC. A routine meeting was held Saturday. The sub-committee on anesthesia voted to recommend to the Commission that they change their method of payment for anesthesia. This does not constitute a request for an increase in fees, but a request that all anesthesia be paid for on a time basis: \$10.00 for the first half hour, and \$5.00 for each additional half-hour, with a maximum authorization of \$25.00. Any additional charges should be submitted to the State Advisory Committee for consideration.

Aging

Dr. Cannady reported as chairman of the Committee on Aging. Plans for the conference to be sponsored by the committee and the Secretaries' Conference group (September 27, Springfield) are proceeding satisfactorily. All speakers mentioned on the tentative program have accepted. All subjects on the program are considered essential. The purpose of the conference is to stimulate interest and to encourage the development of county society programs.

Guests being invited include the two United States Senators; Representatives Noah Mason and Thomas O'Brien; State Senator Broyles, the chairman of the Governor's Commission on Aging; the president, executive secretary, and representatives from the Illinois Joint Council to Improve the Health Care of the Aged; representatives from the Hospital Association, the Illinois Nursing Home Association, the Illinois Dental Society, and from the office of the Council on Medical Service of the AMA. At the suggestion of the Council the committee will include representatives of the Chamber of Commerce also.

The Council delegated the chairman of the Committee on Aging to talk with representatives of Blue Cross and Blue Shield Plans in Illinois about the immediate possibility of sales of policies to the over 65 group. On August 20, the committee representative was joined at a luncheon meeting by officers of the ISMS and representatives of the two Blue Cross-Blue Shield Plans in Illinois. Illinois Medical Service acted as the host to the group. The two plans were

represented by their executive directors and the physicians serving on their Boards of Directors.

All present recognized the fact that effective measures must be taken to provide adequate medical care to those 65 or over. The Rockford group has a Blue Shield indemnity plan pending the approval of the State Department of Insurance. All phases of the problem were discussed. We were assured by the representatives of the Blue Shield programs that if a program were developed, it would be available to all 65 and over regardless of income, except the chronically ill. It was suggested by the group that physicians in Illinois be asked to accept as payment in full, the benefits stated in the plan (probably based on present standard plans) for those with prescribed income and asset limits, but the indemnity program would apply to those with incomes and asset limits above the minimum stated in the proposed program.

We were assured that Blue Cross would develop a program to accompany the Blue Shield program for older people. However, we were informed that the Blue Cross program would probably not provide a reduced cost program due to the difficulty in reducing hospital costs.

It was recognized by the entire group that Blue Shield plans for the aged in Illinois must be uniform. It was suggested that the two Illinois Blue Shield plans be requested to prepare a uniform program to be submitted to the physicians in this state. The Committee on Aging recommends that the Council of the Illinois State Medical Society request the two Blue Shield plans in Illinois prepare a uniform policy for people 65 and over, to be submitted to the physicians, and that this plan be available for the conference on September 27. Such plan should state definite fees for prescribed services. The physicians in Illinois could then be polled by the Committee on Medical Service and Public Relations regarding their willingness to participate in this special plan by accepting the benefits provided as payment in full for people with specified maximum income and asset value, but that the indemnity plan would apply to those with incomes and asset values above the stated maximum amounts.

MOTION: (Endres-DuPuy) that the Council concur in the recommendations as presented in Dr. Cannady's report. Motion carried.

Dr. Montgomery stressed the importance of

the September 27 meeting in Springfield. All county medical society officers should be notified again; all should be told that anyone desiring to attend will be welcome.

Nutrition

Dr. Dailey reported as chairman of the Committee on Nutrition. The meeting which is co-sponsored by the committee will be held this year in Macomb, Illinois, at the Western Illinois University. The program is an outstanding one and Eugene Wittenborn, of the Department of Public Health, has been most helpful. The Society will be represented officially by Dr. O'Neill as president, and all physicians able to attend will be welcome. There will be some expense involved for speakers which the committee desires to have approved.

MOTION: (DuPuy-Goodyear) that the Council authorize the customary committee expense and participation in this meeting. Motion carried.

Ad Hoc Committee

The report of the Ad Hoc Committee to review the Edlund report was presented by Dr. Hamilton as chairman, and approved as amended.

Discussion of various lines of communication followed. The calling of a district meeting by the Councilor following meetings of the Council can be developed into a fine means of communication and can be one way in which the Councilor can keep the physicians in his district informed of society activity. The difference between a meeting and a caucus should be kept in mind. The political caucus might arise in a district only about once every three years, but should not be handled in the same manner as an informative meeting which is a part of the responsibility of a Councilor.

The president has the power to request that the first and second vice president relieve him of some of the responsibilities of presiding at the meetings of the House. The importance of outlining the powers and duties of any additional society officers should be kept in mind when any such change is contemplated.

MOTION: (Fullerton-Piszcsek) that the report of the Ad Hoc Committee be mimeographed and mailed with the Edlund report. Motion carried. This to go to all delegates and alternates for the 1959 meeting.

MOTION: (DuPuy-Portes) that the Ad Hoc Committee be dismissed and thanked for the report submitted. Motion carried.

Sept. 27 meeting

Montgomery stated that he hoped that all members of the Committee on Medical Service and Public Relations, the Advisory Committee to the IPAC, and the Committee on Aging would be in attendance at the Springfield meeting on September 27. The Council will have called a meeting, at the time of the conference, at the Leland Hotel.

Dr. Limarzi reported as chairman of the Committee on Postgraduate Medical Education and Scientific Service. Letters have been sent out dealing with postgraduate meetings in the various councilor districts. Also a letter has been sent to the secretaries of the county societies asking about speakers for their scientific meetings. Enclosed with the letter was a new supplementary list of speakers and their subjects. There will be a meeting of the committee on August 27, to which the new members will be invited. The committee has been asked to arrange a program for the Southern Illinois Medical Association and also for the Englewood Branch of the CMS. The radio programs over WJJD are going well. Dr. R. E. Lee and Dr. Coye C. Mason will present programs in the near future. Five have been held to date. The first Postgraduate Conference will be held at Champaign on September 10 under the auspices of Stritch School of Medicine — Dr. George O'Brien. Lincoln will have a meeting on the third Thursday in March, 1960.

MOTION: (Fullerton-Piszczyk) that the report be accepted. Motion carried.

Industrial Health

Dr. Bennett reported as chairman of the Committee on Industrial Health. The June 4 meeting was well attended. Men from Philadelphia, New York, Los Angeles, and elsewhere were present and some 70 members of the panels on impartial testimony were at the dinner to hear these various presentations. Another dinner for the remainder of the panel members will be held this fall.

Physicians and judges don't know too much about the importance of impartial medical testimony, and the committee has developed a handbook from many sources to assist the two groups.

The committee recommends that a handbook be made up for panel members dealing with what can and cannot be done; the committee also recommends that a handbook be prepared for the judges letting them know how these panels will function and how they will prove helpful. The judge must know how to make use of the panel for maximum benefits. We are ready to let everyone know that the framework for this service is set up and available.

MOTION: (Hesseltine-Goodyear) that this report be approved. Motion carried.

Dept. of Public Health

Dr. Cross reported as Director of the Illinois Department of Public Health.

Polio situation: We have arrived at the time of year when polio is ordinarily at peak prevalence. In Illinois, polio prevalence has been relatively low but twice that of the corresponding time in 1958. Up through August 14 we had 54 cases this year as against 25 last year. Of the 54 cases, 31 (or 57 per cent) were paralytic. Of the 54 cases, 10 were among Negroes and 9 of these were paralytic. Of the 54 cases, 11 (including 4 paralytic) had received 3 or more inoculations of vaccine, and 25 had received no vaccine. Aside from Knox County, with 7 cases, and Rock Island with 12, cases have been widely scattered through 18 counties. The vaccination program has gone very well in Illinois; we have distributed nearly a million doses so far this year. In spite of shortage of vaccine lately, we have met practically all demands. Our supply is now low and so is our money for this purpose.

Regional office

Around September 1, the Department of Public Health will open a regional office in Chicago. This will make a total of six regional offices in the state. The Chicago office is being opened on the specific recommendation of the Northeastern Illinois Metropolitan Area Local Governmental Services Commission, of which Representative Paul J. Randolph is chairman. After two years of study, this was the only definite recommendation made by the Commission in its report to the General Assembly.

The Chicago regional office will be in charge of Dr. Claire E. Healey, a graduate of the School of Public Health of the University of Minnesota. Her staff will consist of a nurse, two engineers, and clerical help. The office will be located on

the 8th floor of the Chicago State Tuberculosis Sanitarium. The office is to promote co-ordination of the services of the several hundred official and voluntary health agencies in the metropolitan area, particularly in Cook County.

Chronic diseases

Chronic diseases and the disabilities of the elderly are much in the minds of people generally throughout the nation. The President has called a White House Conference on Aging for January 1961. Magazines—Saturday Evening Post, Life, etc.—have been featuring the subject. The USPHS has taken a lively interest in chronic diseases and the welfare of the aged during recent years. The AMA, the APHA, and component societies have done likewise. Elderly people have formed several nationwide organizations (such as the American Association of Retired Persons) with impressive membership. State legislatures have established commissions over the past several years to study the situation with appropriate legislation in view.

In Illinois more and more responsibility for action in this field is being placed on the State Department of Public Health. This responsibility includes the supervision of nursing homes and hospitals and homes for the aged. It also includes programs for control of cancer and heart disease with money earmarked for those purposes.

This all assists, but it does not go far enough. The chronics and the aged who need help are at home, or nearby. They are in the local community. For that reason, any service must be rendered at the local community level. No good way to bring about such service in an adequate manner exists except through the operation of full-time professional local health departments. Certainly the State Department can do little more than it now undertakes. Exclusive of the tuberculosis hospitals, we have only 12 medical officers and about 33 nurses on the payroll. This staff cannot be increased much in the foreseeable future because of money shortage.

Any dent in the chronic disease problem and the care of the aged will require long term planning and long term programs. It can be done only on the local front. Whatever government does can be done best through local health departments. For that reason, we are doing all we can to encourage the establishment of local health departments where there are none, and to

strengthen those that are active. This fall the State-Wide Public Health Committee will hold a series of five regional meetings to encourage the establishment of full time county health departments.

MOTION: (Piszczeck-Fullerton) that the report be accepted. Motion carried.

Municipal Retirement Fund

Dr. Camp presented a letter from Kenneth F. Manarik, supervisor of the Illinois Municipal Retirement Fund. There are about 40,000 participants in this fund throughout the state. At the present time the fund is paying disability benefits to approximately 500 people. The fund is a pension trust set up for the payment of monthly retirement annuities for civil employees throughout Illinois.

The officers of the fund would like to make use of panels of physicians throughout the state for the specific purpose of examining the 500 people to whom the fund pays disability benefits.

Dr. Piszczeck discussed the problem and suggested that the panels of experts set up for impartial medical testimony might be made available for these employees throughout the state, and he would suggest that the matter be referred to Dr. Bennett for his consideration and suggestion.

MOTION: (Portes-Piszczeck) so move. Motion carried.

AMA meeting St. Louis

Dr. Camp presented a letter from C. Joseph Stetler, secretary of the AMA Council on Legislative Activities, relative to a National Legislative Conference to be held at the Hotel Statler in St. Louis on October 2-3. The AMA will assume the expenses of three representatives; each state is entitled to send five.

MOTION: (Portes-Fullerton) that the matter be referred to the Committee on Medical Service and Public Relations. Motion carried.

Dr. Hamilton, chairman, announced that the three representatives will be Harlan English, E. A. Piszczeck, and Kenneth H. Schnepf. Others to attend the meeting will be Mr. Walter L. Oblinger and Mr. John W. Neal.

"Relative value study"

Dr. Hopkins discussed the meeting to be held in Indianapolis on September 12 dealing with the California "relative value plan" as the basis for establishing fee schedules on a satisfactory basis. The number of units are set for various

procedures, but the value of the basic unit is established at the local level. Dr. Hamilton felt that Illinois should be represented at this meeting and suggested that the President and/or the President Elect, and Mr. John A. Mirt attend this meeting with expenses paid.

MOTION: (Fullerton-Piszczek) so moved. Motion carried.

MOTION: (Portes-Blair) that Dr. R. R. Cross, Jr., be selected as vice chairman, Committee on Arrangements, for the 1960 annual meeting. Motion carried.

MOTION: (Blair-DuPuy) that the members of the Committee on Civil Defense be authorized to attend the Tenth Annual Civil Defense Conference in Chicago at the Hotel Morrison on November 7-8, 1959. Motion carried.

MOTION: (Piszczek-DuPuy) that Dr. Reisch be authorized to make plans for the 1960 Illinois

State Fair exhibit. Motion carried.

MOTION: (Piszczek-Fullerton) that the following be elected as listed: Emeritus: Dr. Lloyd Arnold, Chicago, C.M.S.; Retired: Dr. B. F. Howland, Hollywood Fla., C.M.S. Motion carried.

MOTION: (Piszczek-Fullerton) that the bills as audited by the Finance Committee be approved. Motion carried.

(In the absence of Dr. Carl E. Clark, Dr. Piszczek served as the third member of the Finance Committee for the August 23 meeting).

The Council presented a plaque to Dr. Edwin S. Hamilton for the meritorious service he has rendered to the medical profession through the years.

The Council adjourned at 12:45 p.m.

Respectfully submitted,

HAROLD M. CAMP, M.D., Secretary

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A cough remedy

A rash of new antitussives is being tried both experimentally and clinically. Unfortunately, most of the articles descriptive of these studies leave something to be desired, because conclusions appear to be based on too little supporting evidence. A preparation enjoying some current popularity is Tussionex, which is a combination of resin complexes with dihydrocodeinone (Hycodan; Dicodid) and an antihistaminic agent. It is claimed that antihistamines potentiate the antitussive effect of dehydrocodeinone, while the ion exchange resin forms complexes with the active agents, from which they undergo sustained release into the gastrointestinal tract.

Townsend, of the University of Rochester,

found that the optimal dose of this combination was $\frac{1}{4}$ teaspoonful every 10 to 12 hours for infants under age 1, $\frac{1}{2}$ teaspoonful for children aged 1 to 5, and one teaspoonful for those over 5. Personal variations, however, demanded adjustment of the dose. If a dose was given in the early afternoon and again at bedtime, complete relief from cough was obtained for 10 to 12 hours. Side effects were rare. Constipation occurred in only two of 269 patients treated. Facial pruritus occurred in five, severe enough to stop the medication in two. Lethargy seemed related simply to personal dosage variations and diminished when the dose was lowered for the patient so affected. *Harry Beckman, M.D. Cough Suppression in Children. Wisconsin M.J. June 1959.*

Questions and Answers on Narcotic Act

Ques.: What should a physician do with excess and undesired narcotics?

Ans.: Excess and undesired narcotics in the possession of a physician in Illinois may be disposed of by shipment, charges prepaid (shipments by mail shall not be made), to Mr. George M. Belk, District Supervisor, Federal Bureau of Narcotics, 817 New Post Office Building, Chicago 7, Illinois. An inventory shall be prepared in quadruplicate on Form 142, the triplicate of which shall be forwarded with the narcotics when shipped, the duplicate retained on file by the physician for a period of two years, and the original and quadruplicate forwarded to Mr. Belk. The physician should notify Mr. Belk when the shipment is made, informing him of the size and description of the container in which the narcotics are being forwarded, and enclosing the required copies of the inventory.

Ques.: Is a physician required to issue a prescription on an official prescription blank for narcotics to be administered to his patients in the hospital?

Ans.: No. A practitioner in a hospital may order and prescribe narcotic drugs to be administered in a hospital on a practitioner's order sheet of the patient's chart. The practitioner shall sign with his usual signature the practitioner's order sheet. Narcotic drugs which are ordered on the practitioner's order sheet shall be administered only in the hospital.

Ques.: Is a hospital required to obtain a license from the Division of Narcotic Control?

Ans.: No. A license is not required but no hospital in the state shall have the custody of narcotic drugs unless such hospital has first obtained a letter of approval from the Division of Narcotic Control. A hospital may apply to the Superintendent of the Division of Narcotic Control, 1012 Myers Building, Springfield, for permission to be entrusted with the custody of nar-

cotic drugs for professional use under the direction of a practitioner. There is no charge for this letter of approval.

Ques.: Are hospitals required to register with the federal government before they are permitted to have narcotic drugs?

Ans.: Yes. Hospitals are required to register in Class IV with the Director of Internal Revenue and pay the \$1.00 fee.

Ques.: Is a hospital required to re-register annually the same as a physician?

Ans.: Yes. Re-registration is required annually of all hospitals and \$1.00 is the annual fee.

Ques.: What are the requirements for a physician to be eligible to prescribe narcotics for patients in a hospital?

Ans.: Practitioners, in order to prescribe narcotics for their patients in hospitals must be entitled, under the laws of the state, to so prescribe and they must be registered with the Federal District Director of Internal Revenue for this purpose.

Ques.: Is a practitioner who has an office in Chicago and is registered with the District Director of Internal Revenue for that district permitted to administer or prescribe narcotic drugs in Springfield, without first registering with the Director of Internal Revenue in Springfield?

Ans.: Yes. A physician maintaining an office where he is duly registered with the Director of Internal Revenue of a district in which the office is located, and where his complete stock of narcotic drugs and all narcotic records are kept, may distribute, dispense, give away, administer, or prescribe narcotic drugs in other collection districts in which he may be lawfully engaged in the practice of his profession, within the United States, in the course of his professional practice only, without incurring additional liability.

Ques.: Are nurses permitted to register to administer or dispense narcotic drugs?

Ans.: No. Nurses are regarded as agents of the practitioners or institutions under whose direction or supervision their duties are performed, and they are not permitted to register, nor are they permitted to be in possession of narcotic drugs or preparations except as such agents or as patients. Any unused narcotic drug left by a practitioner with a nurse, to be administered during his absence, upon discharge of the nurse, must be returned to the practitioner, who will account for the drugs on his records.

QUESTIONABLE PRESCRIPTIONS

Some prescriptions that have appeared among

those sent to the Division of Narcotic Control are questionable so far as possible addict use is concerned.

Several prescriptions calling for tincture of opium and olive oil, equal parts, are labeled to be used for rectal trouble. This type of prescription has been received from all sections of the state. It is a known fact that addicts in other parts of the United States have requested physicians to issue this type of prescription and then separate the laudanum and use it for their addiction. Another of the same type is the laudanum to which a few drops of phenol is to be added. This prescription is labeled as earache drops. Addicts also have been known to obtain prescriptions calling for opium suppositories and then use the opium to satisfy their addiction.

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Protoplasts

Protoplasts of bacteria are bacteria without a cell wall. When a wall is built around the center, it is a complete bacterium capable of producing disease. A protoplast is an incomplete organism incapable of causing disease until it is dressed up in its best clothes.

Finally, there are essentially whole bacteria called persisters which remain dormant. The question here is, what are the trigger mechanisms that evoke these infective forms of life into activity? Is it a change in the attacking or offensive forces of the microbial army or is it a crumbling Maginot Line of body defenses? Perhaps it is a combination of the two.

The recent announcement of the synthesis of D.N.A. (desoxynucleic acid), the substance which carries the hereditary characteristics of

cells, is a great advance. When Avery, McCarthy, and McLeod demonstrated that the simultaneous injection of avirulent nonencapsulated pneumococci and the killed protoplasts of virulent pneumococci were injected into mice, they died with pneumonia caused by pneumococci of the type characterized by the virulent pneumococci. Moreover, this characteristic of virulence and encapsulation was carried on by new generations. It was shown further that the important substance in this transformation was D.N.A.

The nonencapsulated and hence harmless pneumococcus could be made to acquire a capsule and become virulent when chemicals were present which could be synthesized into a different organism. *Chester S. Keefer, M.D. Current Concepts of Bacterial Susceptibility and Immunity. Rocky Mountain M.J. July 1959.*

CORRESPONDENCE

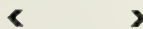


Clinics for crippled children listed for November

Twenty-three clinics for Illinois' physically handicapped children have been scheduled for November by the University of Illinois, Division of Services for Crippled Children. The Division will count 19 general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical, social, and nursing service. There will be two special clinics for children with cardiac conditions and one each for children with rheumatic fever and cerebral palsy. Clinicians are selected from among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

- November 3 — Pittsfield, Illini Hospital
- November 3 — Shelbyville, Methodist Church
- November 3 — Macomb, Phelps Hospital
- November 4 — Hinsdale, Hinsdale Sanitarium
- November 4 — Fairfield, Fairfield Memorial Hospital
- November 5 — Sterling, Community General Hospital
- November 6 — Chicago Heights (Cardiac), St. James Hospital
- November 10 — Casey, Casey High School
- November 10 — East St. Louis, St. Mary's Hospital

- November 10 — Peoria, Children's Hospital
- November 11 — Joliet, Silver Cross Hospital
- November 11 — Urbana, McKinley Hospital
- November 12 — DuQuoin, Marshall-Browning Hospital
- November 12 — Springfield, St. John's Hospital
- November 17 — Alton, Alton Memorial Hospital
- November 18 — Evergreen Park, Little Company of Mary Hospital
- November 18 — Springfield, (Cerebral Palsy), Memorial Hospital
- November 19 — Decatur, Decatur-Macon County Hospital
- November 19 — Elmhurst (Cardiac), Memorial Hospital of DuPage County
- November 19 — Rockford, St. Anthony's Hospital
- November 24 — Effingham (Rheumatic Fever), St. Anthony Hospital
- November 24 — Peoria, Children's Hospital
- November 25 — Aurora, Copley Memorial Hospital



Orthopsychiatric meeting

The American Orthopsychiatric Association, composed of psychiatrists, psychologists, social workers, and others, will hold its 37th annual meeting in the Hotel Sherman, Chicago, February 25-27.

Pamphlet on cancer care

A new pamphlet, "When a Family Faces Cancer," designed to aid families of cancer patients meet the physical and psychological problems connected with the disease, has been issued by the Public Affairs Committee, 22 East 38th Street, New York 16, in co-operation with the American Cancer Society. The cost is 25 cents.

Civil defense conference to be held in Chicago

The 10th annual County Medical Societies' Civil Defense Conference, sponsored by the AMA's Council on National Defense, will be held at the Morrison Hotel, Chicago, November 7-8.

The conference is designed to inform and assist medical and health personnel in the event of a disaster. The program will include workshop sessions concerning medical preparedness, exchange of information dealing with emergency medical services, and talks on civil defense and disaster topics.

Additional information may be obtained from Mr. Frank W. Barton, AMA, 535 North Dearborn Street, Chicago 10.

Ob. & Gynec. Board examinations

Part I examinations of the American Board of Obstetrics and Gynecology will be held in the United States and Canada, January 16. Current bulletins outlining the requirements may be obtained from the Board, 2105 Adelbert Road, Cleveland 6.

Symposium on heart disease

The second International Symposium on Changing Concepts in Medicine (congenital heart disease) will be held in the Bellevue-Stratford Hotel, Philadelphia, April 28-30. Information may be had by writing Dr. Charles P. Bailey, Deborah National Office, 901 Walnut Street, Philadelphia 7.

Pan American meeting

The Pan American Medical Association will hold its 35th annual congress in Mexico City, May 2-11. The meeting will cover medicine, sur-

gery, and dentistry.

For details, write the association, 745 Fifth Avenue, New York 22.

PG course in fractures

The American Fracture Association will hold its 20th annual meeting at the Roosevelt Hotel, New Orleans, November 1-4. The program will consist of postgraduate courses in fractures, to be given by the Tulane University School of Medicine.

Further information may be had by writing to Dr. H. W. Wellmerling, secretary-general of the association, 610 Griesheim Building, Bloomington, Ill.

State-Wide Public Health Committee meetings

Illinois State-Wide Public Health Committee will hold its 15th annual meeting at 9:30 a.m., October 30, at the East Side Health District, East St. Louis. Representatives of the 33 member organizations and other interested groups are expected to attend.

During the morning session, participants will observe the mechanics of a health department in action.

Luncheon meeting and afternoon discussion will be held at Broadview Hotel.

Speakers during the luncheon will include Dr. Roland R. Cross, director of the state Department of Public Health; Dr. J. W. Compton, representing the Illinois State Medical Society, and Dr. James Mahoney, representing the Illinois State Dental Society. Afternoon discussion will cover the services available through a full-time county health department and ways and means of forming and planning such departments.

A special reorganizational meeting of the State-Wide Committee will be held at 10 a.m., November 20 at the Sherman Hotel, Chicago.

Dr. Roland R. Cross, and Dr. Joseph T. O'Neill, president of the Illinois State Medical Society, will give addresses. Benjamin Wham, chairman of the Committee, will preside.

This meeting will bring together presidents, executive secretaries and public health chairmen of various member organizations. Discussion will encompass present problems and future plans of the Committee.

THE P. R. PAGE

John A. Mirt



Education still PR need

Education of the medical profession and the public still continues to be the principal need in the battle against the socialization of medicine. This was the conclusion that came out of the recent two day Public Relations Institute in Chicago, sponsored by the AMA.

One panel stressed the need for informing the public why medical care costs have risen and what service is being rendered for the medical dollar. It was pointed out that wage increases have been the principal factor for a 200 per cent increase in the daily average hospital bill since 1946. The public also must be educated to the fact that because of the results obtained, drugs are not as expensive as they appear to be.

Indiscriminate hospitalization because the patient has insurance also came in for criticism. The medical profession can help stop that abuse. The public, it was felt, also should be educated to the fact that demands for the inclusion of more services means increases in premiums.

The education of the profession, it was suggested, can be carried on through letters from the county medical societies to its members; educational exhibits and films; editorials in medical journals and bulletins; county society symposia; orientation programs for new members.

The Forand Bill and its implications were taken up in a panel of AMA experts on legislation. It was suggested that the problem of

health care of the aged must be circumscribed. The estimate is that between 60 and 65 per cent of those over 65 have health insurance, and that the others either do not want insurance or are already on public assistance.

It also was recommended that a federal survey among selected communities be made to learn the extent of the problem. One feeling was that there is no great problem, because individual physicians have been taking care of the aged for years and will continue to do so.

A point brought out by the panel was that nearly all physicians agree with the AMA in its opposition to the Forand Bill but that few express active interest in the situation. It was the consensus that state and county medical societies must encourage physicians to be more active in political matters.

Another panel presented American, Canadian, and German viewpoints on the dangers of socialized medicine. One warning sounded was that the medical profession has resigned itself in too great a degree in order to guarantee a frictionless living. It was suggested that physicians should face the reality of the threats of adverse government influence in the practice of medicine.

It was agreed that the struggle against socialism was basically "a merchandising problem." Competition in the medical marketplace, principally the federal government, is offering "an attractive bill of goods."

From the institute also came the thought that

physicians must do some creative thinking about the route medicine will travel in the years ahead. More resourceful programs, taking into consideration changing times and public thinking, must be developed, and more community leadership must be provided by physicians.

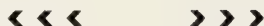
Some medical care cost figures

According to information recently released by the Bureau of Labor Statistics, it actually costs patients less for home and office visits today than it did 25 years ago. In 1933, the average patient worked four hours and 45 minutes to pay for the average office visit to his physician. Today, the same patient works only one hour and 42 minutes to earn the cost of an average office visit. In 1933, it required seven hours and

42 minutes on the job to pay for the average home call of a physician but today it requires only two hours and 48 minutes.

A public relations tip

The forces of inflation are too wide and too powerful for any individual or business to stem singlehanded. Inflation, however, may be combated individually if all citizens will give spoken and written support to those who are working for a strong, sound, and stable dollar, and will oppose unreasonable demands, excessive spending, and schemes that add fuel to the inflationary fire. Give your friends and associates, as well as your representatives in Congress, your constructive views on government budget and spending.



Enema first

Now a word about the preparation of the patient for sigmoidoscopic examination. It is a great temptation if you are going to do the sigmoidoscopic yourself to do it at the time whether or not the patient's bowel has been cleaned out. Or to send him at once to a proctologist in an attempt to hurry the examination to save yourself or the patient time, saying, "He just has a little lump, or a vague symptom, and, anyhow he says his bowel moved good today." You rarely gain anything by this. It is surmised that you want your patient to have as comfortable an examination as he can get and that you desire the best information from the examination that can be

realized. This cannot be assured unless the lower bowel is clean.

For the sake of your patient's feelings and for the best examination have him take plain water enemas until the return is clear at least two hours before the attempt to scope him is made. Thus, the chances are much better that he won't be mauled about in attempting to bull your way around a lot of feces in the lower bowel, one small piece of which may hide just what you are looking for. By all means do the sigmoidoscopic examination before barium is given by mouth or introduced into the lower bowel. The introduction of barium first might hold up a properly done sigmoidoscopic for two to three days. *William J. Martin, M.D. How Would You Examine the Colon? J. Kentucky M.A. July 1959.*

AT THE EDITOR'S DESK



DOINGS AT PALO ALTO

The new Stanford Medical Center in Palo Alto has an electronic secretary. Now the busy physician can telephone a central dictating system at any time during the day; if he is an insomniac, he can unload his paper work at any hour in the night. The next day stenographers transcribe his reports on specialized medical correspondence.

In addition to electronic secretaries, the News Bureau of the Stanford Medical Center released a prediction that, "Ten years from now a married couple previously doomed to remain childless by sterility may be provided with a family through eggs fertilized in a laboratory and then implanted in the mother's womb."

The prediction was made by Dr. R. W. Noyes, a gynecologist, who has conducted research in the "field of defining the environmental conditions needed for fertilization and determining exact degrees of egg growth—in order that implanting may be done at the right moment."

The physical therapy department at Stanford also has a dynamometer for measuring tension, or pull of major muscle groups. This gadget was perfected at Wayne University. Preliminary studies show that some muscles increase in strength with age whereas others hit a plateau early in life. Studies have been conducted on subjects ranging from sixth graders to college students. One fact that emerged is that high

school senior girls are stronger than college women. I always suspected that college women were weaker.

ULCERS AND HEART ATTACKS

Boston physicians remind us again that an old peptic ulcer may become troublesome after myocardial infarction, due to stress and anxiety. This is another reason to use the anticoagulants cautiously.

PLASTER AS FILLER

A 70 year old procedure for bone reconstruction was resurrected by Dr. L. P. Peltier of the University of Kansas Medical Center. He packs the cavity of defective bone with molded plaster of Paris, which serves as a framework over which new bone grows. The plaster is absorbed slowly, usually within two to four months.

PSYCHIATRISTS ARE SCARCE

There has been a 21 per cent increase in the number of psychiatrists during the past three years, from 8,713 to 10,562. This is an average of one psychiatrist for every 16,400 of the population. New York lists one for every 6,400 whereas North Dakota has one for every 72,000. Two-thirds of the psychiatrists treat private patients but only 15 per cent are engaged solely in private practice.

LONELY OLDSTERS

The world-wide suicide rate is high among older persons who have never married or whose spouses have died. The highest rates of men of

70 and over, according to a report from WHO, were noted in Belgium, France, Italy, Holland, Portugal, England, Australia, Switzerland, and Spain. Suicides among elderly women seem to occur about ten years earlier than among men.

The reasons for suicide: Unemployment, social disorganization following political change, poverty, and physical and mental illnesses.

ORAL POLIO VACCINE

Merck & Company has started a large scale experimental production of the Sabin oral polio vaccine. They are interested in conducting extensive clinical tests to establish the safety and efficacy of the vaccine.

The Surgeon General of the United States Public Health Service says the following requirements must be met before a live virus polio vaccine can be licensed: It must be effective against polio, safe, free of any contamination, and capable of commercial production. In his opinion, it will be some time in 1961 before a live virus polio vaccine will meet these requirements.

COMPULSORY HEARING TESTS

One thing leads to another. The National Association of Manufacturers told a senate labor committee that older persons will have greater job opportunities in the next decade. The hearing aid industry never misses a lead, put two and two together, and sent out a news release to this effect:

1. One million persons in the over 55 age bracket have hearing aids.
2. Five million need them.
3. Thousands of "2" are laid off or refused employment because they are hard of hearing and will not use prosthetic devices.
- 4: A broad scale attack "on a regular compulsory basis" should be directed against their refusal to wear hearing aids.
5. Otherwise the entire economy will suffer.

The hearing aid industry certainly deserves A for effort.

We wonder what type of reaction our members would have if the AMA pursued all leads on new prospects for the services of a physician and to drum up business in general. In this particular instance, the AMA would co-operate by starting a campaign to have the hearing of those over 55 tested by physicians.

PHARMACEUTICALS

Bevitam, a zinc tannate complex of cyanoco-

balamin, is Merrell's newest vitamin B₁₂. According to reports, it lasts longer in the tissues because it is not eliminated rapidly by the kidneys. Only two per cent of its B₁₂ was lost through excretion one week after Bevitam was injected. The B₁₂ remaining in the tissues is utilized over a period of 28 days. The product is available in multiple dose vials containing crystalline cyanocobalamin.

Other new entities include Saluron, a new oral diuretic by Bristol, and Upjohn's Depomedrol. Upjohn also is testing Provera, a medroxyprogesterone, in limited areas.

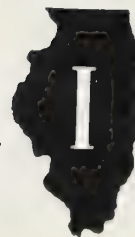
Triamcinolone for nephrosis: This product of Lederle was given to 15 youngsters under 9 years of age by a group of New York physicians. Ten became symptom free and had normal blood and urine after 4 to 6 weeks on the steroid. Five patients relapsed subsequently but three of these were relieved a second time. Successful remissions occurred in eight out of nine with normal blood pressure who had been nephrotic for less than a year. Remissions are not cures but steroids are effective in this disease when used over a long period of time.

Marplan is advocated by Roche as an adjunct in the treatment of angina pectoris. The mode of action of this amine oxidase inhibitor is not understood. But relief of angina was reported in 60 per cent of a group of 30 cardiac patients by Abrams and Becker of Newark in an interview arranged by Roche. In their opinion a small dosage of Marplan, an analogue of iproniazid, is beneficial to the heart and yet not sufficient to damage the liver.

Syntetrin is Bristol's new modified tetracycline. The company says it is 2,500 times more soluble in body fluid than previous forms of tetracycline and a single injection has a prolonged 24 hour antibacterial effect.

Lloyd has changed the name of their surfactant softening agent from Doxical to Surfak. This product has no action on the bowel; its effectiveness in relieving constipation stems from "its ability to reduce surface tension of water and oil to minimum values, resulting in soft formed stools."

NEWS of the STATE



COOK

LECTURE. On November 4, Dr. C. Knight Aldrich, professor and chairman, department of psychiatry, University of Chicago will speak on "Evaluation and Understanding of Emotional Disorders," at 8:00 p.m., North Shore Hospital, 225 Sheridan Road, Winnetka.

HOSPITALS. A new allergy research laboratory has been set up in the Research Institute of Michael Reese Medical Center, headed by research associate Dr. Peter Baram, who received his doctorate in microbiology at the University of Illinois. The laboratory is now engaged in investigating the relationship between allergy and immunity. Another area of investigation will study the differences between normal mucus and mucus in asthmatics, and attempt to find a safe selective mucus digesting agent.

St. Francis Hospital, Evanston, is building a one-story, completely air conditioned structure. An important feature of the new unit will be its ability to accommodate large numbers of casualties in event of a disaster.

NEW POSTS. Dr. William E. Adams, internationally known chest surgeon, has been appointed chairman of the department of surgery at the University of Chicago. He is a member of the Council of ISMS; a faculty member at the University of Chicago for 31 years; and senior consulting surgeon at the Municipal Tuberculosis Sanitarium in Chicago, the Suburban Cook County Tuberculosis Sanitarium in Hinsdale,

and the Great Lakes Naval Training Station Hospital.

Dr. Emil D. W. Hauser, associate professor of orthopedic surgery at Northwestern University Medical School, has been installed as president of the Passavant Hospital medical staff for the year 1959-60.

SOVIET UNION VISIT. Dr. Clifford J. Barborka, associate professor of medicine, Northwestern University Medical School, is one of six American scientists who surveyed the progress of metabolic disease research in the Soviet Union.

JACKSON

PUBLIC WELFARE. The Jackson County Committee on Alcoholism, Murphysboro, has been awarded a grant for \$475. to conduct a two-day seminar for the clergy on alcoholism.

KNOX

MEETING. Dr. William B. Stromberg, instructor in surgery, Northwestern University Medical School, was the speaker at the September meeting of the Knox County Medical Society.

McDONOUGH

MEETING. At the September meeting of the McDonough County Medical Society, Mr. James Smith answered questions regarding the IPAC.

PEORIA

The Peoria Medical Society held its September meeting at the University Club. Dr. Carl V. Moore, Busch professor of medicine, Washington

University, St. Louis, spoke on "Immune Mechanisms in Blood Disease."

ROCK ISLAND

TALK. Dr. Grant H. Laing spoke September 16 before the Iowa and Illinois Central District Medical Association in Rock Island on "Symptom Complexes Due to Deficiencies and Excesses of Elements."

ST. CLAIR

MEETING. The St. Clair County Medical Society held an executive meeting before dinner, and a general meeting after dinner, at Augustine's Restaurant Belleville, in September.

VERMILION

MEETING. Dr. William Requarth, associate professor of surgery, University of Illinois College of Medicine, spoke on "The Treatment of Traumatic Wounds" at the first fall meeting in September of the Vermilion County Medical Society.

GENERAL

NEW POST. Dr. E. M. K. Geiling, former Frank P. Hixon distinguished service professor of pharmacology at the University of Chicago, has been appointed to the scientific staff of the Food and Drug Administration.

NURSING HOMES. A four day institute for administrators of nursing homes, homes for the aged, and sheltered care homes in Illinois was held August 30 through September 2 at the University Law Building, Champaign.

PUBLIC WELFARE. Grants totaling \$1,008,450 have been made for 27 community mental health clinics and other special mental health services. The Madison County Mental Health Clinic at Alton and the Southern Illinois Mental Health Clinic at Murphysboro — two newly established community mental health clinics — are included in these grants.

EPIDEMIOLOGICAL STUDY. The American Cancer Society has embarked upon a large scale epidemiological research study in co-operation with several of its larger divisions. Illinois has been invited to participate.

Approximately 500,000 families (i.e., households) will be enrolled by volunteer researchers

of the Society. These will be families in which there is at least one person over the age of 45. Every member of these families who is over the age of 30 will be asked to fill out a questionnaire. The subject will put the filled-out questionnaire in a confidential envelope and seal it. The volunteer workers will then collect the sealed envelopes.

Once a year thereafter for the next six years, the researchers will report on each subject as alive or dead. Copies of death certificates will be obtained from the health department to ascertain the causes of death. When cancer is reported on a death certificate, we will request the physician who signed the certificate to supply us with additional details (e.g. histologic type, basis of diagnosis, etc.). Once every two years, the subjects will be asked to fill out a brief questionnaire on illness which occurred during the intervening period.

The major purpose of the study is to ascertain the association, if any, between various environmental factors and the later occurrence of cancer. It is hoped that this will yield clues as to a number of possible causes of cancer. In addition, by asking the subjects questions on their physical complaints, we hope to obtain some useful information on the earliest danger signals of cancer.

"YOUR HEALTH COMES FIRST" OVER RADIO CHICAGO WJJD:

October 28 at 6:30 p.m. — DONALD H. ATLAS, associate professor of medicine at Northwestern University Medical School, will discuss "The Pitfalls of Self-Medication."

This public service program is sponsored by the Illinois State Medical Society in co-operation with Radio Chicago WJJD.

LECTURES ARRANGED BY THE ILLINOIS STATE MEDICAL SOCIETY:

DAVID W. CUGELL, assistant professor of Medicine, Northwestern University Medical School, addressed a joint meeting of the Lee and Whiteside County Medical Societies in Dixon, September 17, on "Respiratory Diseases."

EDWARD K. ISAACSON, associate in pediatrics, Northwestern University Medical School, Central School Parent Teacher Association in Des Plaines, November 10, on "Sex Education for the Grammar School Child."

HARVEY WHITE, assistant professor of radiology, Northwestern University Medical School, LaSalle County Medical Society, November 12, on "Radiologic Problems in Children."

FRED P. LONG, Director, Peoria City and County Health Department, Stephenson County Medical Society in Freeport, November 19, on their public health program.

LAWRENCE PERLMAN, clinical assistant professor of medicine, University of Illinois College of Medicine, Stock Yards Branch of the Chicago Medical Society, November 20, on "Diagnosis and Treatment of Strokes."

DEATHS

HERMAN P. BARR*, retired, Chicago, who graduated at Northwestern University Medical School in 1921, died August 22, aged 65. He had been a member of the staffs of the Little Company of Mary and South Shore Hospitals.

MARTIN R. BROMAN*, retired, Evanston, who graduated at Rush Medical College in 1916, died August 17, aged 67. He was pathologist and director of laboratories at Swedish Covenant Hospital, where he had served for 35 years.

CHARLES W. COMPTON*, Springfield, who graduated at Central College of Physicians and Surgeons, Indianapolis, in 1900, died recently, aged 83.

ORA J. CULBERTSON*, Belleville, who graduated at St. Louis University School of Medicine in 1902, died May 29, aged 81. He was associated with the St. Mary's and Christian Welfare Hospitals.

EDWARD G. DEWEIN*, Freeburg, who graduated at the Medical College of Virginia, Richmond, in 1929, died recently, aged 56.

PHILIP H. DORNE*, Chicago, who graduated at Northwestern University Medical School in 1914, died August 20, aged 69. He was a member of the staff of Alexian Brothers Hospital.

NICHOLAS M. DOYLE, retired, Chicago, who graduated at the University of Illinois College of Medicine in 1914, died September 8, aged 79.

FREDERICK G. FRAZIER*, Chicago, who graduated at Meharry Medical College, Nashville, in 1915, died August 26 in Hines Veterans Hospital. He was 71.

ALEXANDER SANFORD FREEMAN*, Chicago, who graduated at the University of Illinois College of Medicine in 1930, died June 22, aged 55. He was associated with Alexian Brothers Hospital.

WILLIAM V. GOODER*, retired, Marengo, who graduated at Northwestern University Medical School in 1905, died August 12, aged 78. A codicil in his will said "I forgive all unpaid medical bills." They amounted to \$25,000.

CHARLES EDWARD GREER*, Charleston, who graduated at Chicago Homeopathic Medical College in 1898, died June 1, aged 84. He was a member of the honorary staff of the Charleston Community Memorial Hospital.

ARTHUR W. GREGG*, retired, Chicago, who graduated at the University of Illinois College of Medicine in 1909, died August 26, aged 76. He was a member of the "Fifty Year Club" of the Illinois State Medical Society, and formerly was associated with the surgical staff of Walther Memorial Hospital.

ROSS W. GRISWOLD*, Litchfield, who graduated at St. Louis University School of Medicine in 1911, died June 29, aged 70. He had served as secretary of the Montgomery County Medical Society for several years, and had practiced medicine in Litchfield for 47 years.

EDWARD H. HATTON, retired, Evanston, who graduated at Rush Medical College in 1912, died August 15, aged 84. He had been professor of pathology at Northwestern University Dental School.

WALTER LESLIE HUMMEL, Chicago, who graduated at Northwestern University Medical School in 1953, died June 29, aged 31.

STEPHEN KOHLENBACH*, Columbia, who graduated at Kansas City Medical College in 1907, died recently, aged 87.

CLEMENT L. MARTIN*, Chicago, who graduated at Creighton University School of Medicine, Omaha, in 1916, died August 15, aged 68. He was clinical professor of surgery at Stritch School of Medicine of Loyola University, senior attending proctologist at Mercy Hospital, and a trustee of the International College of Surgeons. He was a former trustee of the Chicago Medical Society and a past president of the North Side Branch of the Chicago Medical Society.

WILLIAM HENRY MEYER, Chicago, who graduated at the Medical College of Ohio, Cincinnati, in 1898, died June 8, aged 88. He was an honorary staff member at Grant Hospital.

WINFIELD S. MORRISON*, Minonk, who graduated at the Hahnemann Medical College and

*Indicates member of the Illinois State Medical Society.

Hospital, Chicago, in 1905, died August 17, aged 79.

VLADAS PRUNSKIS, Chicago, who graduated at Vytauto Didziojo Universiteto Medicinos Fakulteto, Kaunas, Lithuania, in 1941, died August 21, aged 46. He was a member of the staff of St. Elizabeth's Hospital.

MARY L. ROSENSTIEL*, Freeport, who graduated at the University of Michigan Department of Medicine and Surgery in 1904, died May 17, aged 79. She was associated with Deaconess and St. Francis Hospitals.

ADRIAN H. VANDER VEER*, Chicago, who

graduated at Columbia College of Physicians and Surgeons in 1934, died August 13, aged 49. A well known writer and lecturer in the field of child psychiatry, he was a member of the Institute for Psychoanalysis, and consultant for the Family Service Bureau and for the Jewish Children's Bureau.

ELMER T. P. ZESSIN*, Galesburg, who graduated at the Chicago College of Medicine and Surgery in 1914, died in July, aged 73.

*Indicates member of the Illinois State Medical Society.

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Almost a century ago

In planning the kind of organization in medicine and public health he would like for his adopted state, Dr. Cochran could not see why one and the same body—namely, the Medical Association of the State of Alabama that had been organized in 1847—could not function in both realms. With the eye of a sage, he obtained a clear vision of the objects to be accomplished, and with the accuracy of a logician, he formulated those objects somewhat as follows — and, mind you, this was 87 years ago:

1. To unite the medical profession of the state into a homogeneous and coherent whole, so as to focus its aggregate strength and power and influence on the cause of human health and happiness;

2. To bring the physicians of the several counties of the state together at frequent intervals and those of the state together once annually

for the purpose of discussing scientific and practical questions in medicine;

3. To erect a high standard of qualification for the practice of medicine, and to secure the enactment of a law that would entrust the enforcement of the standard to the organized medical profession of the state;

4. To construct a complete and logical public health system for the municipalities, the counties, and the state, and to secure its establishment by law, with the provision that the practical administration of the system should be committed to the organized medical profession, thus divorcing it forever from commercial and political influence;

5. To provide courts within the profession itself for the intelligent exercise of jurisdiction over the ethics of the profession, with the view of fostering fraternal relations among medical men and thus securing loyalty to pure and exalted principles of professional conduct. *W. R. Carter, M. D. Jerome Cochran. J.M.A. Alabama July 1959.*



NOVEMBER, 1959
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Neurodermatitis — A Psychosomatic Approach

MARIE C. DUNCAN, M.D., EVANSTON

The psychosomatic approach to a disease implies a conceptual approach in which mind and body are considered as integrated forces in the organization of function and the disorganization of disease. It implies a relationship between psyche and soma in the same disease state. Elucidation of the relationship is dependent upon the combined efforts of all the medical specialties involved.²⁰

DEFINITION

The medical literature is replete with conflicting descriptions and uncertain definitions of neurodermatitis.⁵⁵ A graphic statement perhaps as appropriate as any other, is that neurodermatitis is "itchy eczema" and all the variations thereof.

The problem of classification of skin disorders in which emotional factors are considered also is unsettled. There are many classifications, each reflecting the author's bias. None seems acceptable to all. This difficulty gives credence to the multiplicity of etiological factors apparently involved in the genesis of these cutaneous ailments. On the basis of relative importance of psychiat-

ric elements, neurodermatitis falls into the category of cutaneous disorders in which emotional factors usually constitute an important element. Other diseases in this group are pruritus, dyshydrosis, urticaria, rosacea, lichen planus, and alopecia areata.³⁰

Neurodermatitis is of considerable economic importance in the United States. Estimates show an annual incidence of approximately 80,000 cases, one-fourth of whom are partly or totally disabled. Among all skin disorders it is second only to acne in frequency.⁵⁰

The concept of this disease as it is known today had its origin in 1892 when Besnier described it and called it "prurigo diasthesique." Since then the disease and its various stages has been given numerous designations. Some of the commonly used terms are prurigo of Besnier, early and late exudative eczematoid dermatitis, eczema-asthma-hay fever complex of Stokes, the asthma-eczema-prurigo syndrome, flexural eczema, atopic neurodermatitis, lichen simplex chronicus, neurodermite diffuse, and late exudative dermatitis. Currently the most popular terms are atopic dermatitis and neurodermatitis.

The disease may occur at any time during the life of the individual but is rare before the age of 3 months and after 40 years. Hill and Sulz-

From the Department of Neurology and Psychiatry, Northwestern University Medical School.

This paper was prepared in part at the Veterans Research Hospital, Chicago, Illinois.

berger believe the disease has three stages: 1) infantile, 2) childhood, and 3) adult.²² Because of anatomical differences, especially vesiculation in infants as contrasted to lichenification in adults, some clinicians question whether infant eczema ought to be included in this syndrome.⁴⁶ Tachau believes this hesitancy is due primarily to the absence of lichenification, a rare kind of response in infant skin.⁴⁷ Another factor that enhances the difference is the frequent complication of secondary eczematization, resulting in the characteristic picture of acute inflammatory disease.

The clinical appearance of neurodermatitis in childhood and in the adult is similar. In distribution it may be widespread and disseminated or localized and circumscribed. The lesions may be exudative and wet or primarily lichenified and dry. This latter variable is of significance from the psychogenic viewpoint. It is believed that the dry lesions result from a conversion reaction while the exudative lesions are based on a somatization reaction.⁴²

Although most all the material presented here is applicable to neurodermatitis in general, the primary concern of this paper is the dry form, also known as lichen simplex chronicus. For those interested in infant eczema an excellent description is given by Tachau.⁴⁷ He denies the neurogenic origin but recognizes the potential for future psychosomatic problems if the disease is not treated adequately and promptly. The neuropsychiatric aspects of this disease are presented in an excellent integrated summary by Rosenthal.³⁵

NEURODERMATITIS — THE DRY TYPE

This psychocutaneous syndrome is characterized by circular, oval, or irregularly angulated patches of intensely pruritic, excessively furrowed and thickened or lichenified shiny skin, except in areas covered with fine, dull-gray adherent scales. An outstanding feature is the relative absence of erythema in proportion to the other skin changes. The patches or plaques range in size from 3-15 cm. The edges of the plaque usually are not sharply demarcated; rather, the edge seems to fade gradually into normal skin. Scattered and dispersed about the primary mother patch are numerous discrete and confluent lesions, known as satellites.²

On the whole, the histologic picture is non-

specific. The neurodermatitic reaction that involves both cutis and epidermis usually is one of acanthosis, with little if any edema. Hyperkeratosis and parakeratosis usually are present. Some differences are evident from variations in the normal characteristics of the skin at the various anatomic sites.³² Additional differences are due to the presence of concomitant or simultaneously occurring dermatoses and secondary infections.

The lesions show a predilection for the flexor fossae of elbows and knees, the inner aspect of the thighs, the nape of the neck, and subocciput. The scrotum, vulva, perianal region, eyelids, ears, and ankles are less frequent sites.

Not often mentioned concomitants of this skin condition are eye lesions, cataracts, and retinal detachments.^{17,48} These lesions are notoriously difficult to treat; the postoperative complications are high and healing is poor.

DIAGNOSIS

Despite unpredictability and variability in all its aspects the diagnosis can be made on the basis of positive dermatologic and histopathologic grounds.^{4,43}

Shaffer and Beerman point out these characteristics:

- 1) Excessive pruritus out of proportion to the lesion
- 2) Critical times when the maddening itch occurs
- 3) Trigger zone
- 4) Orgiastic nature of the response
- 5) Crises and paroxysms of itch
- 6) Often a vigorous denial of scratching by the patient
- 7) Display of rubbing and scratching during interviews
- 8) Favorite scratch sites
- 9) Development of secondary sites when primary site is cured
- 10) Other evidences of scratching
- 11) Healing effected by a paste boot
- 12) Relation between lesion and stresses noted in anamnestic history
- 13) Occasional exacerbation from psychiatric probing
- 14) History of incidental skin disturbance as a precipitating factor.⁴³

According to these characteristics other diseases that can be included in this category and

which Shaffer and Beerman feel are but variants of the disease exemplified by lichen simplex chronicus are prurigo nodularis, lichenificatio gigantea,³⁴ and Sulzberger-Garbe syndrome. Histopathologically, variations are due to various stages of development and modification in the lichenification process. Further evidence for considering the above named diseases a single entity is that there are many common transitional stages and transmutations among them.

Doyle also emphasizes the need for positive diagnostic criteria lest an unexplained skin disorder fall into the wastebasket of a neurotic problem.¹¹ The diagnosis of the psychiatric aspects should include 1) history, 2) conflict between environment and emotional needs of the patient, 3) opposing internal forces producing the conflict, 4) defenses and solution (skin condition) and their relation to earlier similar situations, and 5) conscious or unconscious significance of the skin lesion—in other words, a good psychiatric evaluation.

ETIOLOGY

There is a wide diversity of opinions as to the etiology and pathogenesis of neurodermatitis and considerable work has been done in this area. The major etiological vectors are the allergic, the psychological, and the constitutional. Some, like Tachau, feel that allergy is the primary factor in the production of atopic dermatitis and that psychiatric elements are secondary, occurring as a reaction to the disease particularly when treatment is not promptly effective. Osborne and Murray are of the opinion that hypersensitivity to the protein of wool is responsible for the cutaneous response.³¹ In an examination of records of over 2,500 patients, they noted that in 75 per cent of the cases in infants up to 2 years, and in 32 per cent of 5-10 year olds the onset occurred in winter—a time when windows are closed, the heat is on, and the air content of wool fiber dust is highest. In the natural course of events the majority of these patients would be expected to improve in the summer months. They did. Elimination of the allergenic factor also resulted in improvement.

There is no doubt that patients with neurodermatitis are abnormal individuals in that they have a hereditary diathesis. The family history usually is positive for hay fever or asthma. They show a propensity to vascular disturbances as well as a polyvalent hypersensitivity. Some inves-

tigators are concerned with the role of disturbances of the sweating mechanism in the production of atopic dermatitis.⁵¹ Others emphasize vasoconstriction and increased vascular activity in atopic dermatitis.³¹ Cormia, in his work on threshold reactivity as measured by histamine induced pruritus, found no significant difference in the thresholds of the uninvolved skin of patients and normals but the duration of the itching was twice as long.⁹

The role of psychic disturbances in the development and perpetuation of a variety of cutaneous syndromes is no longer questioned.^{8,28} Much work has been done to clarify and delineate the role of this complex variable. Adherents of the allergenic theory, however, do not seem to be moved by the evidence propounded by the psychogenic theorists. The most likely answer to the problem lies in a theory of synergistic or interrelated action among all variables.

Efforts have been directed toward many phases of the problem—the significance of the skin as an organ of expression and symbolic meaning of cutaneous symptoms, attempts to establish a personality profile of the susceptible individual, and correlations between emotional upsets and skin changes,³³ formulations of the specific stressful conflicts that exist in the patient, and tests of these hypotheses.

Fenichel notes four characteristics of the skin of psychologic importance: 1) general protective function, 2) erogenous zone, 3) part of the body seen by others, and 4) main site of physiological anxiety at times.¹⁴

In the service of protection, the skin is a delimiting surface of membrane. Under normal conditions, it keeps fluids from oozing out and keeps out noxious stimuli. This function is reflected in the description of emotional sensitivity or emotional armoring of an individual.

That the skin is an erogenous zone and tactile stimulation can be pleasurable is seen in the phenomenon of tickling. The pleasant soothing feeling from use of skin creams and lotions is well known.

Because part of the skin is exposed to the view of others, its disease is also exposed. Thus reactions to skin disorders are likely to be more profound. Too, the visible portion of skin plays an important role in a person's evaluation of beauty and self-image. Words applied to the skin connote judgments of good or bad (e.g., clean,

white, smooth, good, ugly, dirty, dark, scaly, bad). These value judgments are extremely important in determining a person's attitude toward himself and of others toward him. An individual often reacts as if he were one to be shunned or avoided. The term "leper complex" often is used to denote this reaction in any skin disease.²⁰

A person with a skin disorder is one whose own self-concept is not clearly defined. Rather, he is more concerned with others to the extent that other people's needs and desires are more important than his own. It is as if the skin were not delimiting enough in its function. Feelings of unworthiness and unacceptability are common in these patients. These feelings, although attributed to the skin are mere projections onto the skin of deeper psychic disturbances.

Physiological anxiety frequently is expressed in the skin. Emotional disturbances may work great changes in skin if it is the target organ. This is not equivalent to the statement that psychic factors are solely responsible for psychocutaneous disease. Many attempts to describe the neurodermatitis patient have been made. Stokes was a pioneer; the cases he reported were those in which the frictional dermatoses arose out of a perverse attempt to satisfy the sexual urge. He described the personality as one of a tension frame of mind with tremendous drive, restlessness, and overambitiousness.

Numerous case histories cited in the literature demonstrate that certain attacks of skin disease are connected with emotional problems. From his vivid examples of correlation, Robertson concluded that the patient is obsessed with a sense of injustice, resentment, and self-pity.³³ Contact irritants often are the straw that breaks the camel's back. The sense of injustice prompted Halliday to call the disease Job's dermatitis.²¹

Wittkower studied 90 patients disabled by this disease and found a clear-cut relation between emotional disturbances and the onset or exacerbations of eczema in 50 patients.⁵⁴ The precipitating situations leading to onset or relapse were grouped as follows: 1) threats to life and existence, 2) threats of loss of outside sources of support, and 3) threats to inner established patterns (blows to self-esteem and situations arousing sexual conflicts and latent aggressiveness). There appeared to be a hereditary disposition to eczema; in children there was a high incidence

of difficult family positions (unwanted, spoiled, eldest). Adult behavior was of two types: 1) undisguised or childlike, or 2) disguised as calm, stoic, armored individual, limelight seeker, self-driver. Wittkower emphasizes the deep-seated insecurity, inferiority, and aggressiveness of these patients.

McLaughlin et al., in a thorough survey to seek the common psychic factor in adult atopic eczema, studied nine male and 21 female patients with the diagnosis of neurodermatitis based on rigid dermatological criteria. They noted their patients displayed a long-standing personality disorder characterized by great passivity and excessive concern over acceptance by others, a deep but distrustful dependence upon a parental figure, a chronic seething hostility over repeated failure to obtain consistent dependent satisfactions from this person or anyone else, and an over-all inhibition of healthy aggressiveness.²⁷ But these personality traits are not specific to this disease. They are common to all psychosomatic patients.

Cormia, in his study of 137 dermatology patients, noted that in the patient with neurodermatitis a history of long-standing maladjustment is evident.⁸ The current problem usually was related to the area involved. An atmosphere of family dissension is important in contributing to the development of the disease. On the whole, the personality type is of poor predictive value in dermatological syndromes.

Obermayer, in 1952, from a comparison of 13 patients with dry neurodermatitis with 10 control patients by means of a number of personality tests, came to the conclusion that no psychological structure common to all patients could be found.³⁰

Allerhand et al. found opposite results. Their patient with neurodermatitis was a tense, restless individual, who found it difficult to relax. He had a strong need for recognition and success, prided himself on his strength and vitality, tended to be impatient and irritable, and felt the demands of others were infringements and impositions on him. This man was sentimental and was disappointed with other people and the world in general. He is ticklish.³

Cleveland and Fisher compared Rorschach records of 25 patients with chronic neurodermatitis (9½ years' duration or more) with those of 27 patients with dermatitis of brief duration

(6 months). They found the neurodermatitis patient had an increased depreciatory self-concept and that he tended to equate the body unconscious with dirt and repulsion. Tendencies toward exhibitionism were no greater but his concern or fantasies involving defenses against this were. Hostility was less repressed and usually directed toward the self. He viewed the father as powerful, successful, yet distant. The mother was consciously viewed as neutral and quiet, yet unconsciously there was great resentment because of lack of adequate attention any time and no response to a masochistic appeal.⁷

The major difficulty with these descriptions is that they are not specific. They reveal only the kind of person prone to suffer from a neurotic problem. They omit from consideration many other causative factors, particularly the allergic reaction, the hereditary disposition of the individual, and the current emotional climate.

In early concepts of dry type neurodermatitis, the dynamic role of repressed sexual (genital) impulses was stressed as was the eventual onanistic discharge of these impulses in attacks of excoriation (*furor eroticus* and *prurigo onanique* in early descriptions). Miller in 1942-5 was one of the earliest to reveal significant conflicts concerning hostile-aggressive feelings and impulses. This seems to be a fairly consistent trend now.^{1,29,30}

Further clarification developed when one aspect of skin disorders was isolated and studied, the "scratch-itch-scratch" reflex. In dry neurodermatitis and its variants, the lesion is induced by scratching and the fundamental psychocutaneous symptom is excessive excoriation. Seitz and others have noted that in these patients the urge to scratch often arises spontaneously and not in response to itching.^{30,37} Earlier studies stressed the importance of itching and its erogenous aspects.¹⁸

Kepecs et al. noted that patients with symptoms of persistent pruritus and excessive excoriation fell into two groups: the labile hysteric and the rigid compulsive. A hostile-dependent relationship tended to be characteristic of the family constellation. Itching and scratching were manifestations of anger toward the mother.²³

This disturbed relationship with a mother figure is seen in studies by Williams, who was concerned with the factor of maternal rejection in infants with eczema.⁵³ Marmor and Ashley

noted recently that maternal rejection per se is not inevitably present but that disturbances, particularly rejection or separation, are.²⁶ This is consistent with the thesis that lack of sufficient physical contact and tactual experiences of a pleasurable nature are significant genetic factors in skin disease. The response of the pre-eczematous infant has been described as that of one who acts as if he is about to experience pain.

Seitz et al. summarized these concepts and formulated the psychodynamics in the following manner. Frustrating life experiences lead to hostile feelings and aggressive retaliatory impulses that conflict with the moral demands of the conscience (*superego*). This produces guilt and repression of the feelings. The feelings find expression in a masochistic self-punitive discharge—excoriation. This solution is workable since it provides: 1) a discharge of damned up physiological tension, 2) it avoids direct expression of guilt-laden feelings, 3) it atones for guilt, and, 4) it provides a neurotic compensation. This formulation assumes an overly strict *superego*, or conscience. To test this hypothesis Seitz compared a group of 35 patients with neurodermatitis with a control group of 29 patients with nonpsychogenic dermatitis on the basis of responses to the Rosensweig Picture-frustration test. Evaluation of the variables, intensity of *superego*, and degree of masochism, supported the thesis that neurodermatitis patients have more punitive and strict *superegoes*. No significant differences were noted in the extent of masochistic expression of aggression. It may be that these patients express as much aggression and hostility but react more guiltily.³⁸

No section on etiology would be complete without mention of the work by Seitz on the hypnotic substitution of cutaneous reactions for nondermatologic symptoms in patients with nondermatologic psychosomatic disorders. In a patient with psychogenic chorea he was able to replace the symptom with circumscribed dermatitis and with blushing. Both substitutive symptoms have the same psychodynamic functions as the original symptom—exhibitionism and masochism. The technique failed when he attempted to substitute a cutaneous symptom which did not fulfill the same purpose (e.g., pruritus, hyperhidrosis).³⁹

MANAGEMENT

The multiplicity of factors considered in the

etiology and pathogenesis of the disease provides us with clues as to the rationale of management. Attempts to treat the lesion isolated and apart from the patient who displays it are destined to fail. A typical outcome of this method is subsidence of a lesion at the treated site and its simultaneous eruption in another area. Such results lead to discouragement, distrust, and loss of good rapport between physician and patient. Objections to exclusive psychiatric treatment with total disregard of other factors also are warranted. In neurodermatitis, only a combined treatment program based on an integrated approach, with evaluation of all the etiological factors and related variables, can give any promise of success. The extent to which the management can be handled by the dermatologist exclusively depends largely upon his training and interests and the needs of the patient.⁴⁰

To help an individual with dermatitis, the physician has available several therapeutic procedures. These may be classified as local, systemic, and psychiatric.⁵

There are innumerable local medications.^{10,16,19} Most of them are beneficial, but some are potentially harmful. The most important consideration in selection of an ointment may be the fact that the skin of these patients is extremely sensitive. Strong medications are always contraindicated. X-ray therapy is used occasionally. While it is beneficial, it is not recommended because of the possibility of over-irradiation over a period of years.

Systemic therapy includes management of pruritus, dietary changes, and cortisone and ACTH.^{15,36,52} Antihistaminics are of some help in controlling pruritus, as are sedatives. Recently several investigators have found chlorpromazine and meprobamate quite effective.^{13,45,49} Apparently the tranquilizing drugs diminish restlessness, agitation, and anxiety. Thus, less tension needs to be shunted through the conversion mechanism.

ACTH and cortisone give satisfactory results, but most clinicians agree they should be used only as a last resort. Their effect usually is temporary and withdrawal is accompanied, as a rule, by relapse and mental depression. However, in severe chronic cases these drugs are invaluable. They are somewhat akin to electroshock therapy in the psychiatrist's armamentarium. In chronic unresponsive neurodermatitis, electroshock ther-

apy has produced good results.⁵⁶ However, this form of therapy is reserved for patients who are both disabled by the disease and not accessible to any other form of psychiatric treatment.

Elimination of or immunization to specific allergens, together with re-education and medications tend to arrest progress of the disease if treated in childhood.²⁴ In a few patients, desensitization therapy is helpful. This approach, while of some benefit, is not of great value since psychological factors are the major trigger mechanisms that drive a patient past the threshold of reactivity into the realm of clinical signs and symptoms.²⁵

Psychiatric treatment concerns the complete evaluation of the patient's current life situation, the environmental stresses present, and the determination of the symbolic meaning of the disease in terms of his psychic economy. Knowledge of these factors is essential for treatment. It is important to learn whether the psychological factors are primary or incidental. Any chronic and disfiguring disease may produce significant changes in the psychic economy of an individual. Curiosity and revulsion in observers may lead to conflicts over narcissism, exhibitionism, and sexuality. The disease may gratify dependent needs and serve as a defense against sexual contact. An attempt should be made to define the mechanism by which stress leads to structural or physiological change. Finally, it is important to characterize the psychologic factors that appear to play a determining role.⁶

One means of alleviating environmental stress is through hospitalization. This permits a passive withdrawal from normal activities and responsibilities to a dependent state. However, the extent and degree of necessary dependency may sometimes be exceeded and the physician finds himself involved as a causal factor in perpetuating a situation with secondary gains.

The recommendation that a patient live in a warm dry climate is based on the same principle. This is of no value unless the emotional climate is changed. Patients who take their environmental stresses along with them are not helped.⁴⁴

For the treatment of personality factors, psychotherapy is the method of choice. This may be supportive or exploratory, depending upon the patient's need. The nonpsychiatrically trained physician often can do supportive therapy quite successfully. The goal here is the reinforcement

of defenses against repressed impulses through reassurance and sympathetic support. Ventilation of feelings should be in connection with current conflicts only. Greater therapeutic zeal by the untrained is fraught with danger.^{40,41}

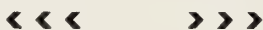
In exploratory psychotherapy, attention is focused on the conversion mechanism and the factors perpetuating this masochistic, self-punitive method of handling hostility and guilt.

These are some of the methods of treatment. Success is not guaranteed in every case, but best results are obtained through a combination of methods prescribed on an individual basis.

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Acute Vascular Occlusion of the Extremities

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Acute vascular obstructions, with the exception of small, subclinical lesions, invariably cause sudden dramatic symptoms, because they interrupt blood flow and because the compensatory mechanisms, consisting of collateral pathways, are not ready. Symptoms usually point to the level of obstruction but these symptoms may be masked by vasospasm, which accompanies acute vascular occlusions to a greater or lesser degree.

Premonitory symptoms usually are due to small clots with vasospasm, which may precede the massive clot by several hours or days in both the arterial and the venous systems. This may permit early preventive and therapeutic measures. In the arterial system of the extremities, the occlusive clot may be due to direct injury to the vessel, contusion of the wall, an inflammatory reaction leading to clotting, or to arteriosclerosis. With the exception of traumatic thrombosis, the latter lesions may be present in the form of arterial narrowing, but they do not become manifest until the clot occludes the narrowed portion of the vessel. Often 70 per cent

of the lumen of the artery may be occluded before symptoms of arterial insufficiency occur. Popliteal artery stenosis will be used as an illustration.

Whether the arterial occlusion is traumatic, thrombotic, or embolic, it should be relieved immediately by exposure of the vessel, removal of the clot, and repair of the artery by lateral or transverse suture or by interposition of a graft if the gap is too long to permit anastomosis without tension. The best material for replacement is the patient's own vein if available; otherwise, a dacron or teflon prosthesis.

If the occlusion is in the venous system, and the patient is seen within a day or two, the recommended procedure is aspiration of the clot followed by ligation of the vein and anticoagulant therapy with heparin. In blunt injuries followed by venous thrombosis this is not always feasible and here, anticoagulants and fibrinolytic agents may be used.

Prevention and treatment of pulmonary embolism follows a distinct routine on our service, in which pain, respiratory distress, the reflex effects on the heart and blood pressure, and the danger of recurrent emboli, are all considered. Generally speaking, if sympathetic blocks are contemplated to tide the circulation over a critical period, they should always precede and not follow anticoagulants, since often massive and occasionally fatal hemorrhage may occur.

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Summary of a talk given at the 119th Annual Meeting, Illinois State Medical Society, in Chicago, May, 1959.

The Prevention of Rheumatic Fever Recurrence

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Prophylactic treatment of rheumatic fever patients with the sulfonamides or penicillin to prevent recurrences is an accepted procedure. This program gained impetus when it was firmly established that rheumatic fever is related directly to a preceding infection with the beta hemolytic streptococcus that was untreated or undertreated. It follows, therefore, that treatment preventing such an infection if possible, or treating a streptococcal infection adequately are ideal methods of warding off rheumatic fever or its recurrences. The American Heart Association, through its medical facilities, has advocated a simple prophylactic program using the sulfonamides or penicillin. One of the other antibiotics is used if the patient is unable to tolerate the two drugs mentioned.

Despite published reports and educational activities, beamed to both lay and professional groups, many rheumatic fever patients are not benefiting from such a prophylactic program. Who is at fault? Is it the responsibility of the patient, the parents, or the physician? While each must share the responsibility, the major portion of the blame lies with the patients and parents, provided they have been educated about the disease. If there is lack of co-operation or understanding, the program suffers and the patient runs the risk of recurrences. It is a known fact that each attack of rheumatic fever leaves its mark on the heart—the more attacks, the more involvement. Each succeeding attack reduces the life expectancy of any rheumatic fever patient.

If a patient who has rheumatic fever were able to understand the mechanism of rheumatic fever recurrences, he would insist upon a prophylactic program. Since most of these patients are children, it then becomes the responsibility of the

parents. If they have been educated through talks with the physician, or have read the pamphlets distributed by the heart association affiliates, they are cognizant of the dangers and would insist upon the prophylactic program. The crux of the program lies with the physician. If he believes that rheumatic fever and beta hemolytic streptococcal infections are interrelated, and that giving prophylactic penicillin will reduce the incidence of recurrences, then all his rheumatic fever patients will be treated. He will see that they and the parents know about recurrences and that routine checkups and the daily taking of penicillin is automatic.

If, on the other hand, he does not believe or is too busy to explain, then the patients will be on their own. What are their chances? Before the days of antibiotics the recurrence rate of rheumatic fever was reported as between 20 to 50 per cent. The most consistent rate is around 20 per cent. With the introduction of penicillin and its use as a prophylactic agent, the rate has been reduced to 1 to 2 per cent.

Assuming we have an enlightened patient and/or parent and a physician who believes in the prophylactic program, what methods and drugs are available? The drug of choice is penicillin, which can be used in two ways. One method depends upon the prevention of beta hemolytic streptococcal infection by continuous or daily administration of small doses. The other method involves early diagnosis and prompt treatment of beta hemolytic streptococcal infections with large doses of penicillin.

In the latter method, the patient would not present himself for treatment unless sick. This type of program has been discouraged. It has been shown by observers at The House of Good Samaritans that only 50 per cent of a series of recurrences had symptoms requiring treatment. The other 50 per cent had no fever or sore throat

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and the only way a beta hemolytic streptococcal infection was elicited was by culture after the recurrence appeared. From these and similar observations, this method of prevention is not desirable. Therefore, the method of continuous daily administration of penicillin orally or by injection at definite intervals is advocated.

Oral buffered penicillin G 250 mg. tablets and oral penicillin V 250 mg. tablets are given twice a day. Intramuscular benzathine penicillin G 1,200,000 units is given once each month. The effectiveness of this regimen can be seen in the following chart:

PERCENTAGE OF REDUCTION IN INFECTION RATE			
	IM	V	G
SYMPTOMATIC	91	91	83
ASYMPTOMATIC	86	49	63
TOTAL	88	65	72

As was stated before, the rate of recurrence was about 1.5 per cent for the year. Without prophylaxis the rate was 19 per cent.

It can be seen that the intramuscular route is best but the oral route is more widely used due to reactions, pain of injection, or failure to keep appointment.

When penicillin cannot be used, the sulfonamides, tetracyclines, or erythromycins are given. The usual dosage is one or two .5 gm. sulfadiazine tablets a day, 100 mg. tetracycline tablets a day, or 100 mg. erythromycin tablets a day. In contrast, the drug of choice in the treatment of an acute beta hemolytic infection is penicillin because of its bactericidal quality, whereas the sulfonamide drugs are essentially bacteriostatic.

Concerning the cost of the prophylactic program, the most economical is the use of the sulfonamides. The next least costly is penicillin, particularly the injectable form. How are the medically indigent patients to be cared for under a prophylactic program? In Illinois, this program has been solved to a degree. Rheumatic fever patients who are unable to afford a private physician may obtain treatment through the Crippled Children's Division of the University of Illinois. At these clinics, penicillin or one of the other drugs is prescribed. This prescription is taken to the local health department offices,

where the drug of the physician's choice is given to the patients, usually a three month supply.

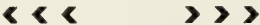
For rheumatic fever patients who can afford private medical care, but for whom the cost of the drug may prove a hardship, the same procedure is followed for obtaining penicillin or a sulfonamide at the health department. The physician, however, must sign a statement to this effect and fill out a special form furnished by the health department. Follow-up on this program is carried on by IBM cards sent to the physician every three months.

How long should a patient stay on this prophylactic program? There is no definite agreement on the time and most of the confusion about the program centers about this point. Some workers advocate the prophylactic drug for the remainder of the patient's life; others for five, 10, or 20 years. About the only way I know to answer this question is to go back to the cause of rheumatic fever. Since rheumatic fever is directly related to the beta hemolytic streptococcus, and an infection with this organism can cause recurrence in a rheumatic fever patient, then these patients must take prophylactic drugs so long as this possibility exists.

With this thought in mind, it is obvious that the diagnosis of rheumatic fever is not to be a casual one. To say that a person has had a mild attack of rheumatic fever without heart involvement or that an unexplained fever is so labeled, and then advise prophylactic drug for many years of that patient's life, is almost as bad as not giving the drug in a typical case. What I am trying to say is, be careful in doubtful instances. If the case does not fit in with Jones Criteria, it is better to observe for months before making a final decision. In this type of problem, it is justifiable to place the patient on prophylactic drug therapy with the understanding that if further observation proves the case not to be one of rheumatic fever, then the drug will be discontinued.

SUMMARY

A rheumatic fever patient who visits his physician regularly, who takes a prophylactic drug religiously, and who observes the rules of good health should never have a recurrent attack.



Acute Abdominal Emergencies: Acute Perforation of Abdominal Viscus

RICHARD H. LAWLER, M.D., F.A.C.S., CHICAGO

There probably is no surgical condition that offers a greater threat to the life of a patient than a perforation, or tear, of an abdominal viscus. Up to recent times this condition carried a high mortality. Even now, in spite of advances in surgery and with the use of antibiotics, blood, fluid, and electrolyte replacement, the best judgment and greatest skill of the surgeon are called for to avoid a fatal outcome. Prompt recognition of a perforation and immediate institution of suitable treatment are vital. Whenever the possibility of perforation exists, every effort should be made to establish the diagnosis at once. Valuable time may be lost by waiting for symptoms that make the diagnosis obvious.

As a result, the surgeon who undertakes the treatment of the patient frequently finds himself confronted with a desperate situation; he must determine which surgical procedure or combination of procedures he shall employ as well as the other appropriate specific and supportive measures.

Two factors that tend to make this situation so serious are: First, the possibility of an underlying disease; second, the extensive peritoneal contamination that so commonly accompanies the perforation.

The diagnosis of perforations or lacerations frequently will not be made until the abdomen has been explored. However, the history and the findings usually have conformed to the pattern of hemorrhage or localized or spreading peritonitis, and the patients have varied greatly in the degree of shock manifested. Differential diagno-

sis may be difficult or impossible from perforated peptic ulcer, acute coronary occlusion, pancreatitis, appendicitis, acute pelvic and bowel conditions, and a host of less common disorders with a similar clinical picture.

The etiological factors contributing to acute perforations may be grouped into two main divisions—namely, spontaneous perforations associated with underlying pathologic processes; and perforations associated with trauma of the penetrating or nonpenetrating types.

With the penetrating type of injury, the physician as well as the patient is immediately concerned as to the possibility of intra-abdominal injury. With nonpenetrating injuries, both may be lulled into a sense of security by the absence of early signs or symptoms of internal injury. Blows to the abdomen from blunt objects are common, and seldom produce serious damage. Injuries are found most commonly in the areas of the relatively fixed viscera: the spleen, liver, and kidney. Tears of the intestine likewise occur near the points of fixation: the jejunum, near the ligament of Treitz, the ileum near the cecum, and the sigmoid colon. With tears of the liver, kidney, and spleen, hemorrhage is a dominant finding and may alert the surgeon to the nature of the injury. Frequently there is severe contusion and hematoma at the site of the injury initially, with perforation and signs and symptoms of peritonitis occurring hours or days later.

When penetration of the peritoneum exists, it is necessary to examine all the organs in the abdominal cavity. If hemorrhage is present, it must be controlled immediately, the free blood and blood clots aspirated, and an orderly examination made of all the other abdominal organs.

STOMACH

Examination of the stomach and duodenum is difficult. To examine the lower end of the esophagus and cardiac end of the stomach, if may

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Presented before the Section on Surgery, 119th Annual Meeting of the Illinois State Medical Society, May 19, 1959.

be necessary to divide the coronary ligament of the left lobe of the liver and reflect it to the right. The surgeon should not hesitate to divide the gastrocolic omentum and enter the lesser sac to get a thorough view of the posterior wall of the stomach, pancreas, and the second and third portions of the duodenum. Hollow organs with no free mesentery should be widely mobilized in the search for through and through penetrations.

Rents in the stomach should be closed individually in layers.

The management of spontaneous acute gastroduodenal perforations, have followed three main trends: 1. Simple suture of the perforation; 2. Immediate subtotal gastrectomy; and 3. Non-operative treatment with antibiotic and continuous suction drainage.

No one method of treatment should be considered ideal for all cases. Simple suture of an acute gastroduodenal perforation has been the time honored treatment of choice among most surgeons. It is an emergency treatment designed primarily to save life rather than cure the ulcer. In closure of the perforation, the surgeon has a quick and definitive means of terminating the peritoneal contamination. Immediate partial gastrectomy is indicated when spontaneous gastroduodenal hemorrhage and perforation coexist, and is the treatment of choice when perforation occurs through a malignant lesion.

SMALL INTESTINE

Tears or perforations in the small intestine may be closed individually if such closure does not compromise the patency of the lumen. If simple closure cannot be done safely, resection with end to end anastomosis will be necessary. Careful examination of the mesentery of the small intestine is necessary and portions of the intestine must be resected where vascular injuries jeopardize the viability of the bowel wall.

COLON

Injuries of the colon present a problem that taxes the judgment and skill of the operator. When the surgeon encounters a perforated lesion of the right colon in a completely unprepared patient, he must consider the possibilities of the pathology involved and consequences of an inadequate procedure. Inflammatory lesions of the colon cannot always be distinguished from neoplastic ones. The surgeon must base his judg-

ment on probabilities. Cancer of the right colon is not a rarity; symptoms of perforation may be the primary symptom. Excluding appendicitis, cancer is the commonest lesion of the right colon causing perforation. Perforation of the bowel in ulcerative colitis has always carried an ominous prognosis. Among the other causes of perforation are amebic and bacillary dysenteries, and ulcers due to ACTH, cortisone, tuberculosis, typhoid, trauma.

One of the most serious abdominal catastrophes encountered by the surgeon is massive destruction of hollow abdominal viscus produced by the prolonged use of a suction tube for decompression of hollow abdominal viscus. This condition probably occurs when a timid physician attempts to substitute a tube for necessary surgery.

For a single perforation, or a through and through perforation of the cecum, suture of the perforation and exteriorization of the involved portion following mobilization of the adjacent bowel is the treatment of choice. If there are extensive injuries to the right colon, resection and ileotransverse colostomy may be necessary. Exteriorization of a portion of the transverse colon over a glass rod is a relatively simple procedure. Injuries to the splenic flexure or descending colon require extensive mobilization before exteriorization can be carried out. Experience has shown that injuries to the extraperitoneal portions of the colon should be treated by proximal colostomy, with suture of the rent in the bowel and drainage.

LIVER

The liver is frequently injured in abdominal wounds. Laceration of this organ must be sutured. The use of hemostatic packs have aided considerably in the control of hemorrhage. These packs are placed in the rent and may be sutured there if necessary. Owing to the extreme friability of the liver, it is best to use mattress sutures as they have less tendency to tear. In all liver injuries, it is advisable to place a drain down to the region of the tear to prevent the development of bile peritonitis. The drain may be brought out through a separate stab wound.

SPLEEN

Injuries to the spleen are best treated by surgical removal of the injured organ.

KIDNEY

Injuries to the kidney rarely require nephrectomy unless there is damage to its main vessels.

PANCREAS

The pancreas is often injured. In these cases, hemorrhage must be controlled, the rent or laceration of the capsule sutured, and a drain placed close to the site of injury to allow for the escape of pancreatic secretions.

URINARY BLADDER

Lacerations or tears of the urinary bladder should be sutured in layers and constant suction through a suprapubic cystotomy or the introduction of an indwelling catheter. The wounds should all be drained down to the space of Retzius.

CONCLUSION

It is evident that the survival of a patient with a perforation or tear of an abdominal viscus is directly related to the promptness with which surgical correction of the defect is accomplished. Whenever the possibility of perforation exists, every effort should be made to establish the diagnosis at once.

With a penetrating type of injury, it is necessary to examine all the organs of the abdominal cavity.

No one method of treatment should be considered ideal for all types of perforation of an abdominal viscus.

The prolonged use of a suction tube as a substitute for necessary surgery should be condemned.

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Opportunities for the practitioner

The practitioner can follow the natural course of disease and its modification by all manner of influences: a huge field of unending interest and challenge. He can study the efficacy and dangers of new remedies. Every effective measure opens new avenues for research into the fundamental nature of the disorder affected. Each great advance raises far more questions than it answers, and opens doors for useful investigation to practitioners who can see the opportunities. Any clinical field in which there is nearly universal acceptance of current ideas is ripe for critical questioning and productive research.

The exact observations of Trousseau in the

middle of the last century led him to doubt the value of bloodletting and other current measures used in treatment of people with strokes, and he ceased to use these methods because, as he said, "experience has taught me that patients do better without them." William Pickles, during his years of general practice in Yorkshire, in addition to throwing much light on the epidemiology of common infections, was the first in England to report cases of Bornholm disease. Many similar examples of important contributions by practitioners of former and modern times could be cited did time permit. *R. F. Farquharson, F.R.C.P. The Value of Participation in Research in the Continuing Education of the Practicing Doctor. Brit. M. J. Sept. 5, 1959.*

Obesity and Atherosclerotic Coronary Heart Disease

JEREMIAH STAMLER, M.D., CHICAGO

Obesity is a major health hazard. Coronary disease, cerebral vascular disease, hypertensive disease, nephritis, and diabetes occur more frequently in the obese.

Since atherosclerotic coronary heart disease is epidemic in middle-aged and elderly Americans today, the association between it and obesity is especially important. The following are a few representative statistics: Depending on the degree of obesity, middle-aged overweight men developed coronary disease one and one-half to three times as often as men of normal weight.^{1,2} Men experiencing a 20 per cent or more weight gain from young adulthood to middle-age developed two and one-half times as much coronary disease as men not gaining this much weight.

When overweight was accompanied by other defects, the risk of premature coronary heart disease was increased even more. Obese, hypertensive men had a coronary incidence rate four times greater than nonobese, normotensive men.¹ The risk in obese, hypercholesterolemic men was even greater, and those with all three defects were especially susceptible.² Overweight diabetic men also were highly prone to develop coronary disease in middle-age.

The challenge of these findings is driven home by the fact that 20 to 30 per cent of middle-aged men are obese; 10 to 15 per cent are obese and hypertensive or obese and hypercholesterolemic, or have all three defects.

These findings also have great practical significance, for they point the way to a possible approach to the prevention of atherosclerotic

coronary disease. Thus, it is now possible to assess risk of premature coronary disease in men as yet free of clinical evidence of the disease. Obesity, hypercholesterolemia, hypertension, diabetes, hypothyroidism, renal damage, and heavy smoking make men susceptible to premature coronary disease, especially when they occur in combination. Their recognition permits the physician to identify high risk individuals before they develop signs or symptoms of atherosclerotic coronary heart disease.

All these defects are amenable to modern medical therapy. They may be muted, controlled, or eliminated thus offering the possibility of converting high risk men into moderate or even low risk individuals. Thus the possibility arises of preventing coronary disease.

It is against the background of this challenge that the medical profession today confronts the difficult problem of achieving effective obesity correction. In approaching this problem, it is important to keep in mind that insidious overeating is an ingrained habit established and reinforced by deep-rooted causal factors in the United States today not only personal and individualized, but also social and cultural. Basically, that is why obesity is such a common problem among us today, and such a difficult one.

Adult habits are never easy to change. Drug therapy of disease is a cinch compared to the treatment of obesity. This is so, precisely because real success in the latter depends ultimately upon breaking a habit pattern—despite social and cultural pressures tending to maintain it—and establishing a new one. The first prerequisite for success in such an undertaking is the skillful nurturing of patient motivation. The second is detailed attention to and guidance of the patient in his process of nutritional de-conditioning and re-conditioning.

Particular emphasis must be given to the concept of working for a permanent change in eat-

From the Heart Disease Control Program, Chicago Board of Health, Herman N. Bundeson, M.D., President.

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While the Nutrition Committee of the Chicago Heart Association is sponsoring this article, the opinions expressed are those of the authors and do not necessarily represent the official view of that committee.

ing habits. This viewpoint is stressed in preference to the idea of going on a diet, since the latter is regarded by many subjects as a temporary chore akin to taking medicine for illness. Once the cure has been effected, they assume treatment may be stopped. Thus the basis is laid for regaining the excess weight previously lost.

To avoid this pernicious cyclical process, a perspective must be developed of a change in eating habits to be achieved in two phases—a period of gradual weight reduction, followed by an indefinite period on a maintenance regimen, with interval supervision until the desired new habit pattern is fully established. During both phases, the dietary recommendations are designed to achieve and maintain not only optimal weight, but also optimal nutrition and optimal levels of serum cholesterol and blood pressure. The previous dietary pattern is altered both quantitatively and qualitatively.

This approach, it should be noted, precludes crash diets—be they banana diets, grapefruit diets, lettuce diets, formula diets, or what have you from the armamentarium of the faddists. It also precludes diets high in animal fat, since they tend to raise serum cholesterol levels.^{3,4} Similarly, drugs for weight reduction—be they appetite-suppressants (bulk replacers, sedatives, tranquilizers, amphetamines, et al.) and/or metabolism-accelerators (thyroid hormone, et al.)—are temporary adjuvants at best, to be used briefly when absolutely necessary to help people get over the hump in the initial period of weight reduction.

Consider for example, a 45 year old male, 5'8" tall, of medium frame, weighing 190 lbs, with a history of a 40 pound weight gain since age 25. A desirable weight, based on this history and the available tables, is 150 pounds. Estimated daily caloric intake for maintenance of desirable weight is $150 \times 15 = 2,250$ calories. A recommended intake of 1,500 calories would mean a deficit of 700-800 calories per day or 4,900 to 5,600 per week. Progressive weight reduction should proceed at a gradual pace of about 1.5 pounds per week. Desirable weight should be achieved in about 25 weeks. During this time period, considerable progress should be made in reconditioning the subject to new eating habits. A reasonable recommendation is a daily food intake composed of 100 grams protein

(yielding 400 calories), 140 grams carbohydrate (yielding 560 calories), and 60 gram fat (yielding 540 calories). The fat intake is regulated so that the 60 gram total is composed of 40 to 45 grams unsaturated fat and 20 to 15 grams saturated fat, yielding a ratio of unsaturated to saturated fat of 2:1 or 3:1, and *pari passu*, a small intake of cholesterol. This pattern is known to result in alleviation of hypercholesterolemia in most cases^{4,5}. Particularly if elevated blood pressure also is a problem, salt intake is regulated.

Such a pattern readily permits a high intake of all essential nutrients—vitamins, minerals, amino acids, and fatty acids. By making provision for intake of considerable bulk (with few calories per forkful), and a moderate fat intake, it goes as far as possible in the circumstances toward achieving satiety, or at least a minimum of hunger discomfort in the early weeks of weight reduction.

The foregoing considerations add up to recommendations emphasizing lean meats and poultry (round steak, veal, game, chicken, and turkey), fish, skim milk, cottage cheese, whole grain or enriched flour products, fruits (including citrus), vegetables (including dark green and yellow), and vegetable oils (in modest quantities during the months of weight reduction). These recommendations permit delectable recipes, providing gourmet delights even during weight reduction.⁶

To be de-emphasized are fat cuts of meat, table spreads, and solid cooking fats (butter, margarine, lard, hydrogenated vegetable fats, bacon, and salt pork), cooking methods involving addition of solid fat rather than its removal. Also to be de-emphasized are alcohol and carbonated beverages, cheese, cream, eggs, rich foods (pastries, pies, cakes, etc.)—foods high in calories per forkful because of their high content of processed fats and refined carbohydrates, and low in nutrients.

It is essential also to advise the subject concerning all habit patterns, not just diet. Consider the problem of sedentary living—lack of physical activity. A 15 minute brisk walk consumes about 50 additional calories; a 10 minute swim, about 50 calories; bicycling or working out on a rowing machine for 10 minutes, about 50 calories. Excessive intake of only 50 calories

per day can lead to gross obesity in middle age. Additional energy expenditure of 50 calories per day through moderate regular exercise can be of considerable importance in the prevention and treatment of obesity, provided the stimulus to appetite is kept under control. Nor is it necessary to belabor the importance of contending with excessive use of tobacco and alcohol, fatigue, stress, strain, and tension.

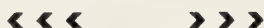
No discussion of obesity is adequate without a strong plea for effective action by the physician to encourage prevention. Preventive medicine is a well established part of pediatric and obstetric practice. In this era, when our major public health problems are the so-called chronic degenerative diseases of middle age—hypertensive and atherosclerotic diseases, diabetes, the arthritides, mental illness, and neoplastic diseases—preventive medicine must come to the fore in the work of generalists and internists with adult patients. The prevention of obesity is of no small importance in the prophylaxis and therapy of many of the foregoing diseases.

Physicians are more and more seeing young adults, in their twenties and thirties, for periodic health check-ups in private practice, and in in-

dustrial and labor medical departments. Many are still at or near desirable weight, or perhaps have put on only a few pounds. Possibly they show a pattern of small weight gain, let us say 5 pounds, for the first time in the intervening year. This is the juncture for vigorous intervention by the physician to prevent obesity. This is the point at which he can achieve the best success in combating obesity—and the greatest hope for success in preventing its concomitant health hazards. It is highly worthwhile, therefore, to make this preventive approach a routine part of American medical practice among adults.

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Stone Age diet

The Stone Age all-meat diet is wholesome. It is an eat-all-you-want reducing diet that permits you to forget you are dieting—no hunger pains remind you. It saves time and money. Best of all, it improves the temperament. It somehow makes you feel optimistic, mildly euphoric.

Stef (Vihjalmur Stefansson) used to love his role of being a thorn in the flesh of nutritionists. But in 1957 an article appeared in the August J.A.M.A. confirming what Stef had known for

years from his anthropology and his own experience. The author of this book also has popularized Stef's diet in England, with the blessing of staid British medical folk. Was it with the faintest trace of disappointment that Stef turned to me, after a strenuous nutrition discussion, and said: "I have always been right. But now I am becoming orthodox! I shall have to find a new heresy." *Evelyn Stefansson. Apr. 22, 1959. Preface in Eat Fat And Grow Slim by Dr. Richard MacKarness. Garden City, N. Y., Doubleday, 1959.*

Principles of Management With Corticosteroid Drugs

SAMUEL C. BUKANTZ, M.D., DENVER

The basic precepts under which the corticosteroid drugs are used at the Jewish National Home for Asthmatic Children in Denver consist of the following:

1. There is no wish to use the corticosteroid drugs; whenever it is clinically possible to do so, the drugs are not employed at all. When they are used, they are given in as small a dose and for as short a period of time as it is possible.
2. The corticosteroid drugs are not considered to be cures for any allergic disease, including asthma.
3. It is the intent of the staff to discontinue the use of the corticosteroid drugs as soon as it is humanly possible to do so.
4. The staff is completely cognizant of the fact that these are extremely potent drugs, especially in the growing child because of their prominent effects in certain dosage.
5. It is believed that a full physiologic and pharmacological knowledge of the action of these agents is absolutely essential to their proper use.
6. All patients who are under therapy, especially children, deserve and obtain the closest possible supervision, especially during the several months following withdrawal of the drugs during any single course of therapy.
7. Much more information is needed concerning adrenal-cortical responses at various stages following the institution of corticosteroid therapy in asthmatic children, and

preliminary steps have been taken at the Jewish National Home to establish investigative programs designed to obtain such information.

Utilizing these general principles in the administration of the corticosteroid drugs to patients, they are the most valuable therapeutic agents available for the management of the allergic diseases. Indeed, they are life-sparing and extremely helpful in total rehabilitation of the often mentally and physically crippled children who suffer from intractable bronchial asthma. Our clinical experiences are with the most severe cases of asthma that can possibly be obtained. Admission to the institution is restricted to intractable asthma—i.e., that form of asthma that has resisted the most approved and best forms of therapy available for one to two years in the community from which the child comes. Within the definition of asthma, and other allergic diseases, the author believes that reversibility by corticosteroid drugs should be included.

The statistics of our recent experiences with particular reference to the utilization of the corticosteroid drugs will be reviewed. The evidence is that among admissions since July 1, 1958, 98 per cent of the patients had anti-inflammatory steroids at some time prior to their admission to our institution. Of these children, approximately 60 per cent are on corticosteroid drugs in maintenance dosage at the time of their admission. These figures compare with those of the preceding year—i.e., July, 1957 to June 30, 1958—to indicate an increasing trend toward admission of patients who are considered such severe cases as to require the use of the anti-inflammatory or corticosteroid drugs. After admission, approximately 25 per cent of children on the drugs can be withdrawn within one month; an additional 25 per cent within the second month; and approximately 20 per cent more during the next four months. There re-

Medical and Research Director, Jewish National Home for Asthmatic Children and Children's Asthma Research Institute and Hospital; Associate Professor of Clinical Medicine, University of Colorado School of Medicine.

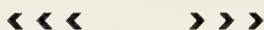
Summary of a talk given at the 119th Annual Meeting, Illinois State Medical Society, in Chicago, May, 1959.

mains 30 per cent or more arriving on maintenance dosages of the corticosteroids who cannot be withdrawn during a one or two year residence at Denver. It is believed that this represents a biologically unique population of asthmatic children, and a project is in process for more intensive study of the characteristics of this population of patients in comparison with other intractable asthmatics and with nonintractable asthmatics.

Individual case presentations will illustrate several interesting clinical associations observed during the use of the drugs; for example, the inverse relationship between the response of asthma and atopic dermatitis when both are present simultaneously; the occurrence of asthma after a long quiescent period following the initiation of control of atopic dermatitis with anti-inflammatory steroids; some observations on the effect of dexamethasone on weight, diabetic tendencies, and the occurrence of asthma that would suggest that this drug has effects similar to those corticosteroids previously described; the apparent effect of an epidemic of a febrile viral illness upon suppressing the manifestations of

asthma for a short time during the peak of the epidemic; the failure of maintenance dosages of the anti-inflammatory or corticosteroid drugs to affect significantly the level of fever reached as compared with patients not receiving these by patients under treatment with these drugs during the course of an epidemic; and, finally, the failure of full maintenance dosages of the corticosteroid drugs to reverse a positive tuberculin test in a patient.

Among the clinical suggestions to be stressed are that patients in the childhood age group who have a positive tuberculin test should, when receiving corticosteroid drugs, be given the benefit of full therapeutic doses of isoniazid and para-amino salicylic acid. This therapy should be conducted for the duration of corticosteroid therapy and for perhaps a month after its discontinuance. The final point to be made is the observance of careful clinical surveillance and the institution of appropriate laboratory procedures throughout the course of observation of patients on these drugs to permit their wide usage without any significant complications or side effects.

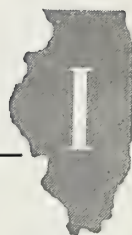


County medical society as censors

Recent years have witnessed nagging attacks by certain government personnel and agencies against the medical profession. The press has not been too kind in this direction either. The attack seems to be against "organized" medicine. What the critics don't seem to take into account is that medicine in this country is organized as much for the protection of the patient as it is

for the physician. We would not enjoy such benefits as emergency call service or the reduction of fees for lower income bracket patients if it were not for the fact that our physicians get together and iron out these problems. And don't forget that every county medical society has a board of censors for the express purpose of disciplining its own membership. *Marc Woodward. Detailing is Also Public Relations. Rhode Island M.J. Aug. 1959.*

CASE REPORTS



Malignant Lymphoma and Hashimoto's Disease

IRVING RUDMAN, M.D., CLAUDE W. OTTO, M.D., AND BEN H. NEIMAN, M.D.

THE possible relationship between malignant lymphoma of the thyroid gland and Hashimoto's disease has been a subject of recurring interest.^{1,2} Neither condition is common but many published cases of thyroid lymphoma report the coexistence of Hashimoto's struma.³ It has been suggested repeatedly that malignant thyroid lymphoma may evolve from a pre-existing lymphocytic thyroiditis. We recently treated a patient whose clinical course seems to represent another facet of this problem.

The patient, a 57 year old white female, consulted her physician in November of 1957 because of the recent appearance of several nodules in the neck. Twenty years before, she had undergone surgery for removal of "goiter." No information is available concerning the histological diagnosis but the patient feels certain the lesion was interpreted as benign. There were no associated symptoms of hyperthyroidism. Following surgery she had had no complaints related to the neck region until three painless nodules developed almost simultaneously, one in the region

of the surgical scar and the other two on the right side of the neck. No symptoms were present suggesting thyroid malfunction.

Physical examination was essentially normal except for the neck. In the area of the thyroid isthmus there was a 2 x 3.5 cm. movable, firm, and nontender nodule. There were two movable, nontender nodules overlying the right sternomastoid muscle in its midportion, the larger 2 cm. in diameter. There was no demonstrable lymphadenopathy elsewhere.

Laboratory studies revealed normal cell counts and morphology in the peripheral blood. Chest X-ray and urinalysis were normal.

At operation an encapsulated, nonadherent nodule of the thyroid isthmus was removed. It was not possible to identify positively any other thyroid tissue in the area. Both nodules were removed from the right sternomastoid area.

Microscopic examination of the thyroid nodule revealed the presence of isolated acini separated by dense collections of lymphoid cells (Figure 1). In many areas, lymph follicles with germinal centers were prevalent. At the periphery of the nodule, small collections of lymphoid cells were seen in the dense fibrous stroma and between

From the Hedges Clinic, Frankfort, Silver Cross Hospital, Joliet, and Chicago Medical School, Chicago.



Figure 1. Hashimoto's thyroid struma (H. & E. x 110).

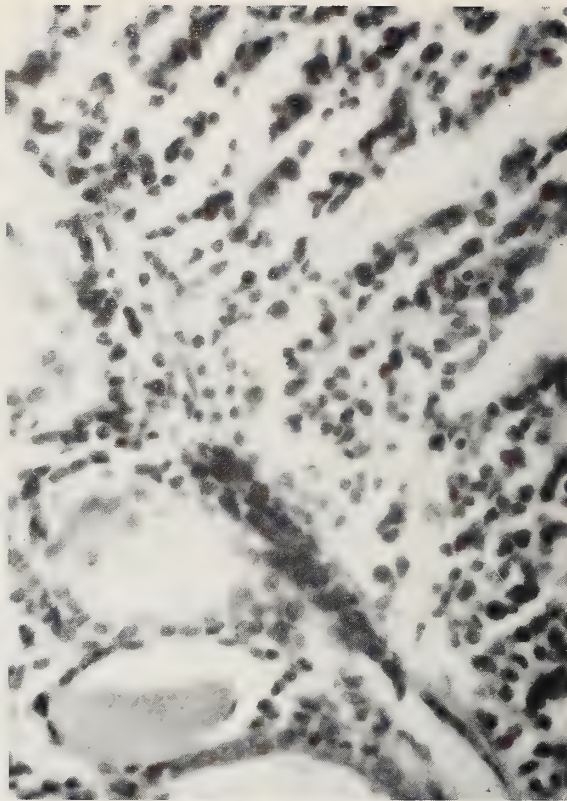


Figure 2. Hashimoto's thyroid struma (H. & E. x 400).

small acini (Figure 2). Sections from the cervical lymph nodes showed hyperplasia with occasional formation of large follicles (Figures 3 and 4). The histological diagnoses were Hashimoto's struma and nonspecific hyperplasia of the lymph nodes.

The patient's immediate postoperative course was uncomplicated except for the development of symptoms of hypothyroidism. They were controlled readily with desiccated thyroid.

Five months after surgery the woman again developed a mass in the right sternomastoid area, which enlarged to a diameter of 4 cm. It was assumed that this represented further cervical node hyperplasia, secondary to thyroiditis and operative trauma. Empirically the decision was made to treat the mass by X-ray therapy, totaling 1,000 r. Six weeks after the start of radiation, the mass liquefied and discharged spontaneously through the skin. Rapid healing followed.

One year after removal of the thyroid nodule, the patient developed a movable, firm, and non-tender mass in the right axilla which was 6 x 5 cm. The remainder of the physical examination

was normal. Peripheral blood and chest X-ray examinations were normal.

At this time the tissue slides of the previously excised thyroid gland and cervical nodes were reviewed. The pathologist suggested a possible diagnosis of giant follicular hyperplasia in the cervical nodes (Figures 3 and 4). He saw no evidence to invalidate the original diagnosis of Hashimoto's struma in the thyroid nodule.

The right axilla mass was removed with several satellite nodes. Microscopic examination revealed a lymph node in which the architecture was destroyed (Figures 5 and 6). The follicles were obscured. The sinuses and cords were packed with uniform ovoid cells which were small and had a lymphocytic appearance. The chromatin of the nuclei often were slightly clumpy. A few mitotic figures were seen. Between these dense groups of lymphoid cells was a fine reticulum. The histologic diagnosis was lymphosarcoma.

DISCUSSION

Since lymphocytic infiltration of the thyroid is

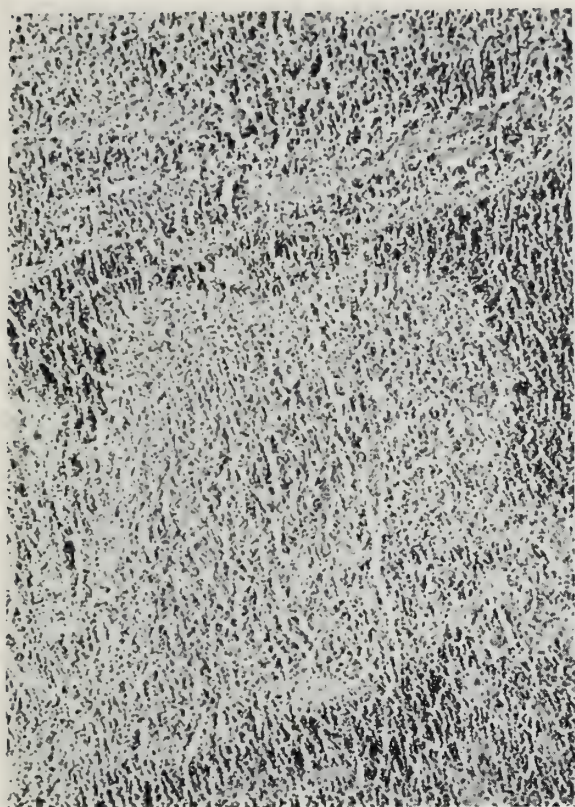


Figure 3. Giant follicular hyperplasia of cervical lymph node initially interpreted as nonspecific hyperplasia (H. & E. x 110).

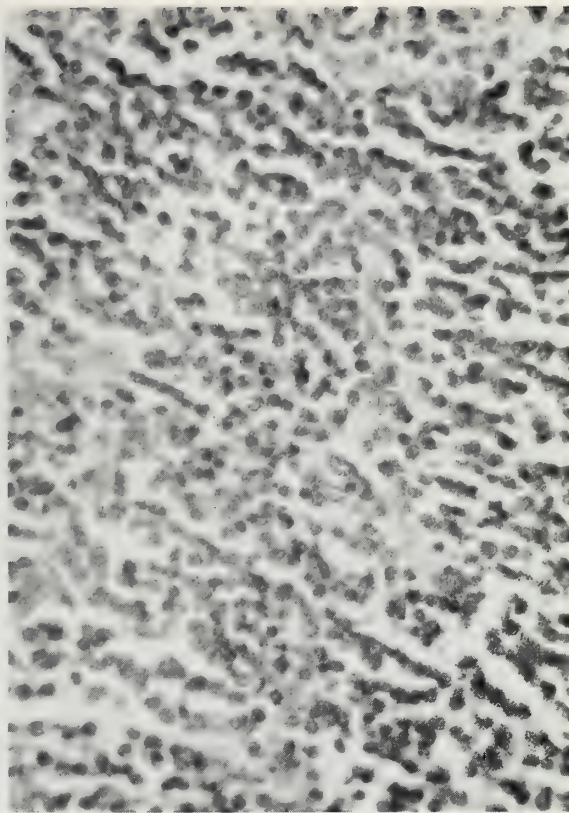


Figure 4. Giant follicular hyperplasia of cervical lymph node initially interpreted as nonspecific hyperplasia (H. & E. x 400).

rather common in older women, it is possible that a diagnosis of Hashimoto's disease in such individuals is not always valid. The histological changes may reflect an aging process in the gland rather than a superimposed disease. Nevertheless, in relation to thyroid lymphoma, this distinction may be a matter of semantics. It seems to be well established that lymphosarcoma of the thyroid gland is most common in the same sex and age group that develops benign lymphocytic changes.

To argue that Hashimoto's struma predisposes to malignant thyroid lymphoma would seem to deny the widely accepted theory of the multicentric origin of lymphoma. However, malignant thyroid lymphoma is almost always rapidly fatal and perhaps it is the time element that precludes the development of other foci.

The findings reported in this case would seem to indicate a direct relationship between the initial hyperplasia of the cervical nodes and later development of lymphoma of the axillary nodes. Moreover, it is tempting to assume that the si-

multaneous appearance of the enlarged cervical nodes and the thyroid nodule was not coincidental.

We may speculate on the implications of the clinical course presented by this patient. It is conceivable that benign lymphocytic thyroid infiltration may signal a basic derangement in lymph tissue, ultimately progressing in some cases to clinical evidence of multicentric lymphoma. This case might then be interpreted as demonstrating several stages in the progress from abnormal but benign lymphocytic derangement to lymphosarcoma.

The tendency for lymphocytic infiltration to involve the thyroid gland and small intestine on occasion may dictate the first appearance of lymphosarcoma in these areas. This would not preclude the development of lymphoma in other regions if the initial lesion is not rapidly fatal. In the patient described in this report, excision of the thyroid isthmus apparently removed most of the remaining functional thyroid tissue. Per-



Figure 5. Lymphosarcoma of axillary lymph node (H. & E. x 110).

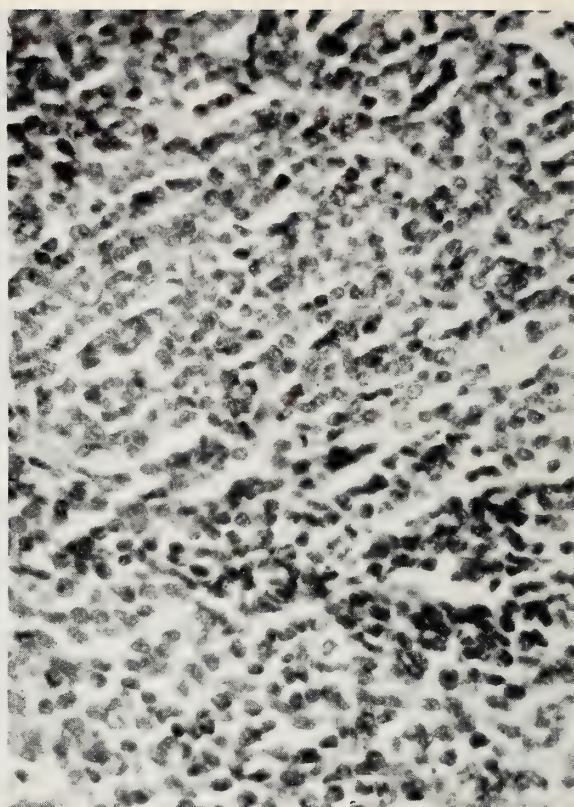


Figure 6. Lymphocarcinoma of axillary lymph node (H. & E. x 400).

haps this may have deterred the early development of a thyroid lymphoma.

This case has been presented in the belief that it provides fragmentary information pertinent to the problem of the lymphoma diseases.

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Clinical-Surgical Conferences



Volvulus of the Colon

**Department of Surgery
Cook County Hospital**

Moderator:

ROBERT J. FREEARK, M.D.
Director of Surgical Education
Cook County Hospital

Discussants:

NATHAN CROHN, M.D., Professor of Surgery, Chicago Medical School; Chairman of Department of Surgery, Michael Reese Hospital

EVERETT NICHOLAS, M.D., Assistant Clinical Professor of Surgery, Stritch School of Medicine of Loyola University; Attending Staff, Cook County Hospital

Dr. Robert Freeark: Few problems in all of surgery possess the challenging aspects of diagnosis and treatment that occur with bowel obstruction. Here within a single patient are the intricacies of radiologic interpretation, diagnostic physical findings, biochemical derangements, and demands upon surgical technique that have tried the talents of many an outstanding surgeon. Our subject today concerns one of the most interesting types of bowel obstruction. The sequence of events, when a segment of bowel becomes twisted about its mesentery, is in many respects the same as in simple obstructions occurring at any location in the gastrointestinal tract. However, in volvulus these mechanical and pathologic alterations are accelerated and intensified by early interference with circulation. Delay in diagnosis or in the institution of prompt

and aggressive therapy weighs heavily against the patient's chances for survival.

We are fortunate to have with us today two surgeons well qualified to discuss this problem. Dr. Crohn is an authority on the problems of bowel obstruction as well as diseases of the colon. An able surgeon and gifted teacher, his responsibilities as chairman of the surgical department at Michael Reese Hospital have provided considerable experience with this condition. Dr. Nicholas was one of the first surgical residents to train at Cook County Hospital. He learned well the lessons of bowel obstruction under the expert tutelage of the late Dr. Roger Vaughn. Dr. Nicholas is one of the recent additions to the attending staff in surgery at this hospital. His technical skill, vast clinical experience, and enthusiastic teaching have long ago established him as one of the most sought after consultants in the hospital.

Case 1. *Dr. William Marshall* (surgical resident): This 19 year old Negro male entered Cook County Hospital on March 15, 1959, with complaints of cramping abdominal pain of two days' duration. The onset was sudden, and the pain was poorly localized by the patient but recurred in waves every 15 to 20 minutes. His last bowel movement had been three days prior to admission. Vomiting was denied. His past history, obtained from his mother, revealed periodic episodes of cramping abdominal pain lasting several hours at a time since the age of 10. The pa-

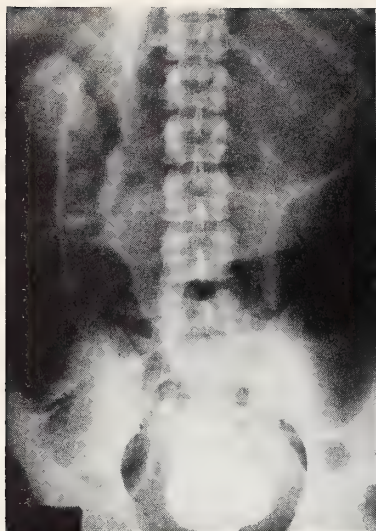


Figure 1.



Figure 2.



Figure 3.

tient had experienced six to eight such attacks every year but all were of short duration, had not required hospitalization, and were mild by comparison with the present episode.

Physical examination at the time of admission revealed a well nourished Negro male with marked abdominal distention and mild lower abdominal tenderness. The remainder of the examination was not remarkable except for the presence of high pitched obstructive bowel sounds coincident with the complaint of abdominal cramps. Urinalysis and hemogram were within normal limits.

Roentgenograms on admission showed marked gaseous distention of the sigmoid colon. Subsequent emergency barium enema (Figure 1) confirmed the presence of a low sigmoid obstruction.

Dr. Freeark: Dr. Leon Love of the department of diagnostic radiology will review these films.

Dr. Leon Love: Careful study of this patient's initial X-ray films suggests a diagnosis of sigmoid volvulus. A good radiologic examination without barium is all you need to make that diagnosis. The thing that strikes you immediately is the large air filled sac without haustrations and with smooth margins that occupies most of the film. The origin of this loop must be determined. The cecum is readily identified in its normal location. The remainder of the ascending, transverse, and descending colon is somewhat dilated to the level of the sigmoid, and at this point the large dilated loop begins. Whenever this is found look

for three white lines converging at the area of the base of the distended bowel which usually represents the site of volvulus.

On the upright and lateral decubitus projections there is a long air fluid level in the mid-abdomen within the saclike area. The loops of a sigmoid volvulus may point to the right or to the left, but the latter is more common.

On barium enema the barium column advances to the point of twist and identifies the site of obstruction. Surgeons call this opaque mass of barium the "ace of spades" sign, while radiologists refer to it as the "bird of prey." The terms merely identify the tapering barium as it approaches the site of volvulus.

Dr. Marshall: The patient's abdomen was moderately tender on admission to the hospital but he was afebrile. Emergency surgical exploration was considered, but an attempt at nonoperative reduction of the twisted loop of bowel was elected. Accordingly a sigmoidoscope was inserted into the rectosigmoid region and a large, well lubricated rectal tube was passed gently through the scope to the point of obstruction and into the distended twisted loop. A dramatic and unforgettable release of air and fluid quickly ensued and abdominal distention disappeared.

Dr. Freeark: Dr. Crohn, we present you with this case for discussion at this point. Do you agree with the management, and where do we go from here?

Dr. Nathan N. Crohn: One can hardly argue with success. Here is a boy who obviously is otherwise in good condition and who, generally

speaking, could withstand surgery of considerable magnitude. The ideal operation would be the removal of the entire loop that is involved and the performing of an end-to-end anastomosis. This operation may be done if the bowel proximal to the proposed anastomotic line is healthy. As a rule, dependent upon the duration of the obstruction, not only is the involved loop distended but the proximal colon also is distended. Unless distention is of short duration, that bowel has impaired circulation and viability and may fail to heal. When leakage of such an anastomosis occurs, a high mortality rate can be anticipated. Thus every effort should be made to avoid such an operation.

In recent years, much success has been obtained in deflation of the distended sigmoid loop by passage of a rectal tube, either with or without the use of a proctoscope. The pressure that builds up in such a closed loop is considerable so that if you are successful in passing the tube, it is best to stand to one side because of the forceful expulsion of air and odor which is unexpectedly sudden. If, after successful passage of the tube, expulsion is not forceful, infarction or necrosis of the involved loop in the neglected case should be suspected. Cases have been reported of successful deflation of loops that were gangrenous in strangulation obstruction. Alert and suspicious observations are in order after reduction. If successful, the rectal tube should be left in place for a few days until the tone of the bowel musculature returns.

It must be remembered that this bowel wall is extremely thin since the colon is stretched to four or five times its normal diameter. As the musculature is stretched, its tone is lost, in much the same way as a rubber band that is stretched excessively. Tone and resiliency are lost, and contractility is so impaired, the loop must be deflated for several days before contractility is restored and its function resumed. Not until this occurs is it wise to operate upon the patient. If the rectal tube is successful in its purpose, the emergency is tided over. The patient may then systemically as well as locally be brought to optimum condition for a definitive one stage operation, namely, resection and primary anastomosis.

In the case under discussion, I would leave the rectal tube in place for a few days and allow a longer period (10 to 14 days or more) for

recuperation. Too long a wait may permit recurrence, especially in the younger patient. If the rectal tube fails in its purpose, laparotomy is indicated and usually a resection of the obstructive loop is performed. An anastomosis, which is largely a colostomy closure, is done at a later date.

Dr. Freeark: We embarked upon a program much as you describe, but the patient elected to remove the rectal tube sooner than we had planned, with recurrence two days later of distention and abdominal pain. Dr. Marshall reinserted the rectal tube in hopes of regaining decompression. This was associated with the passage of some air but not the dramatic deflation that was achieved the first time.

Dr. Love: Roentgenograms taken at this time show this large distended loop has decreased in size.

Dr. Marshall: The films that were taken after insertion of the rectal tube a second time were interesting. I think it would have deflated easily but I kept advancing the tube up. It went up into the loop, turned around and came back down below the point of twist. It was obvious at surgery that evening that the tube had gone up into the loop, turned around and come back down. If there had been holes along the tube he would have been decompressed. As it happened, the only air holes in the tube were at the tip which no longer rested in the distended loop but had returned to the rectum.

Dr. Freeark: Failure to accomplish reduction and the patient's growing dislike for the aforementioned manipulations led to surgical exploration, and I would like now to show some pictures taken at the time of surgery. The first one (Figure 2) shows a loop of bowel brought out through the left paramedian incision; this represents the more proximal loop of sigmoid colon. The slide gives an idea of the degree of distention. In spite of its size, if ever there was a sigmoid volvulus that looked safe to resect and anastomose, this was it. Perhaps because of the earlier decompression the bowel looked as though it would hold stitches well; it was empty and we were sorely tempted. The next slide (Figure 3) was intended to show a characteristic finding in sigmoid volvulus. The thickening at the base of the sigmoid mesocolon takes on a white plaque-like arrangement and is sometimes the only find-

ing in a patient who has had volvulus that has reduced spontaneously. It gives some indication that previous attacks, of which this patient complained, were related to this same volvulus. The extreme length of the sigmoid mesocolon also is made out. The photograph shows the loop after it was decompressed by manipulating the rectal tube. A separate incision of the McBurney type was made in the left lower quadrant and the loop of bowel exteriorized. Dr. Marshall later operated upon the patient and resected the loop, leaving him with a double barreled colostomy. The fecal stream came through the proximal stoma and the other end was defunctionalized. This colostomy was closed in due time and he is now restored to normal activity and bowel function. The resected specimen did not show evidence of an intrinsic defect that might explain the occurrence of this condition at his age. We assume that he had a congenitally long sigmoid mesocolon that twisted periodically and, in this instance at least, did not untwist spontaneously.

Dr. Marshall: Is volvulus of this type at this age seen commonly?

Dr. Crohn: I have never seen a patient with volvulus at this age. There are reports in the literature of volvulus in very young patients, but the majority of cases are in the older age group.

Case 2. *Dr. Eugene Broccolo* (surgical resident): This 75 year old white female was admitted in a shocklike state on March 14, 1959. Past history obtained from relatives revealed the presence of hypertension and parkinsonism for many years. Hysterectomy, thyroidectomy, and cholecystectomy were the only occasions for hospitalization. A stroke two years earlier had left the patient bedridden and aphasic. Five days prior to admission, abdominal distention and discomfort were noted, along with cessation of bowel movement. The patient vomited once shortly before admission, and an enema given at home returned fecal matter and bright red blood.

On physical examination the patient was noted to be debilitated, markedly distended, ashen in color. Her blood pressure was 80/50 mm. Hg., respirations 40 per minute, temperature 100° F., and pulse 110 per minute. The abdomen was tympanitic and silent. There were well healed upper right paramedian and lower midline scars. Moderate tenderness was elicited throughout.

Rectal examination showed scant stool and ++ ++ stool benzidine. Hematocrit was 50 per cent.

When abdominal roentgenograms were suggestive of sigmoid volvulus, attempts at proctoscopic rectal tube reduction were carried out without success. The patient was given saline, plasma, and blood and was taken to surgery four hours after admission with a blood pressure of 78/58 mm. Hg.

Dr. Love: Here we have two X-ray films (Figures 4 and 5) where again we see the large saclike distended area with no haustral markings. In this case we get a better idea of the thin wall Dr. Crohn mentioned, and there is a nice demonstration of the three white lines converging at the point of twist. The remainder of the colon is in the form of a halo. On the lateral decubitus projection (Figure 5) there is a long straight air fluid level and a large distended air sac, and this is consistent with a diagnosis of volvulus.

Dr. Broccolo: After seeing the films we attempted to reduce this volvulus through the proctoscope. After numerous attempts we were not able to pass the tube beyond the twist, although we could visualize the twist very well.

Dr. Freeark: Proctoscopically was the bowel of normal color?

Dr. Broccolo: Yes. I wasn't concerned about the color at all. The bowel was slightly friable at the point of twist but the color was good.

Dr. Freeark: Dr. Nicholas, we await your assessment of the management in this case, and I hope you will touch upon an important question. The use of rectal tube decompression has been advocated in certain cases of volvulus. Is it intended for the fairly good risk patient, such as our first case, or for this bad risk patient in whom surgery is so obviously precarious?

Dr. Nicholas: I think it is obvious which of these two patients you would like to take care of. I also think that probably this is the way in which you find the disease of volvulus: it tends to be at one or other extreme in respect to the patient's condition. He is either merely troubled or he is desperately and critically ill. Here is a patient with hypertension and parkinsonism; she has had a stroke and cannot tell you what is the matter; she has had two operations that might have been sufficient by way of adhesions to prevent this disease from occurring. She has

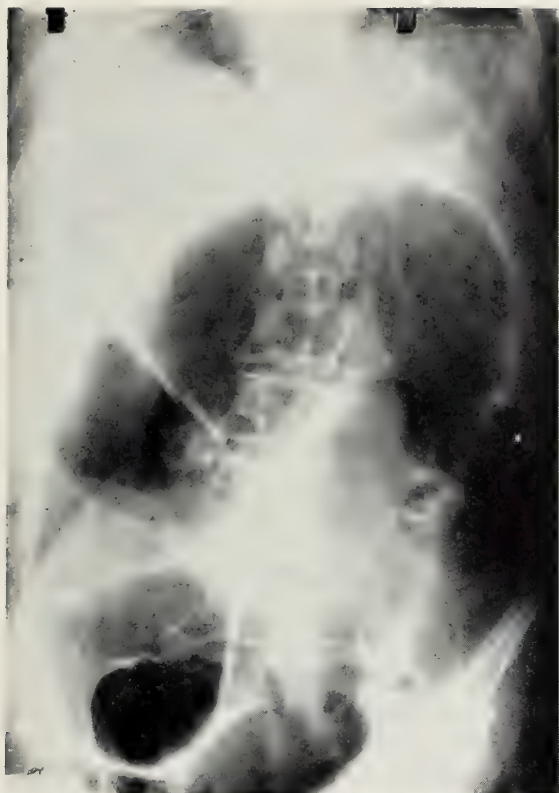


Figure 4.



Figure 5.

been ill for five days with abdominal pain. If you have such a patient you know there is something significant going on. It doesn't matter whether it is gall bladder disease, appendicitis, or pelvic inflammatory disease; if it has been there for five days you are in for difficulties.

This patient is vomiting and that is significant. Simple and uncomplicated volvulus with a closed loop may be unassociated with vomiting. If vomiting is present, something else is happening. It may represent a closed loop where the tension is so great the proximal colon is obstructed and no more air can enter, or there may be leakage with peritonitis. You know that something beyond a simple torsion of a loop of bowel has happened.

When such a patient comes to the ward it is apparent that she is not a person who can be taken to surgery at this time. She is in shock. That means she is very sick and you don't know why, but it is a clinical syndrome that usually is unmistakable. The patient requires remedies that are thought to be useful and helpful and known to you all. No doubt she had that treatment. It seems to me with the situation as it presents

here, if you are going to conceive of her as a surgical candidate, it should be soon because she has been ill five days, her color is poor, the abdomen is tympanitic and silent, and X-ray indicates she has a serious condition that will not correct itself spontaneously. So we say this patient should have the simplest thing possible and perhaps pass a proctoscope and see if you can insert a rectal tube or, with the end of the instrument, effect detorsion and let some of this tremendously distended bowel be decompressed. This is not always successful. It should be tried because if it is successful it affords an opportunity to correct the acute obstruction, to improve the patient's condition, and to sterilize the bowel in anticipation of surgery as soon as possible. Since you do not know whether detorsion will be possible, the patient should be prepared for surgery immediately and the detorsion procedure attempted with the operating room ready.

In the first case presented today, I suspect that I would have done a primary one-stage procedure because, had neomycin been started on admission, the bowel would be as sterile as possible. You had enough days to have a colon

that could be fairly well managed from the standpoint of contamination. In addition, when you have a situation like volvulus, you often do not have to do an anastomosis in the part where there is the most trouble. Rotation occurs only in the mesentery and the point of torsion may be the most strangulated portion, but beyond that there may be bowel that can be handled. So the anastomosis may be in an area that is not part of the volvulus. The proximal loop is not too much involved and the distal loop has been spared. Whether that was possible in the first case of the 19 year old male I don't know, but I suspect I would have done primary resection and have felt safe because the site of this anastomosis could be decompressed by leaving a rectal tube in the colon. Dr. Roger Vaughn used to say that one rectal tube was not much good, two were better, and three a great deal better. So you should not think in terms of using one colon tube because often the loop of bowel would come against the opening, but if you had more than one ultimately you could provide suction and get total decompression. I would add that it is not always difficult to pass more than one tube to bring about detorsion. On one occasion we used three tubes held together by rubber bands to make one unit and we had a good result. This is impossible if you pass the tube through the proctosigmoidoscope. If they are passed blindly, however, it can be done.

From what we know about this second patient it is unlikely she will recover from her disease unless you can alter the process abruptly. These patients are either in little trouble or are in a great deal of difficulty, as this lady was, and I would suspect that you could not do more for her by way of preparation. The thing that is producing shock is the bowel that has lost its blood supply, and removal will have to be done soon because this patient will not tolerate waiting. It must be remembered, however, that this patient is vomiting and that she has something besides simple rotation. There is backing up into the small bowel or peritonitis is developing. I would be worried that there might be a gangrenous bowel, and since minor efforts to alter the condition were not successful, I should take her to the operating room with three colon tubes as far up in that rectum as I could get them, and in the operating room I would hope to deliver

the tubes into the large, dilated, distended loop and thereby effect decompression. This can be done, even if the bowel is very dark and its wall in poor condition. Then you have a loop of bowel that is safer to manage and perhaps you can cause detorsion. Sometimes you are afraid to look at the bowel, let alone handle it. This manipulation of intraluminal tubes in a distended bowel is serious business and nobody undertakes it lightly. You do not just untwist and think everything is all right. You will have less trouble accomplishing detorsion if you can decompress it by passing a tube or tubes into the loop of bowel after the abdomen is opened.

In most of these patients I would try to do the least possible consistent with recovery. Take these loops of bowel outside the abdomen, close the wound around it, then clamp the bowel and remove it after abdominal closure but during the same anesthetic time. Whether this is possible depends upon how deeply into the base of the mesentery the inflammatory response extends. I have seen cases where the root of the mesentery was so thickened that it was impossible to bring the loop above the abdominal wall without further mobilization. Certainly no one should do an unprotected primary anastomosis on this type of patient. In this circumstance, the hastiest kind of anastomosis was performed and a proximal colostomy was done to protect it. —

The mortality rate in this condition is high. Proctoscopic reduction seems to have improved the results in some series. The average patient presents in the fifth or sixth decade and he is usually in serious trouble by the time he reaches the hospital. Neurologic and psychiatric diseases often are noted in these patients, probably related to the chronic constipation and fecal retention.

Dr. Crohn: In this second case there undoubtedly is strangulation, which means impairment of blood supply, and in turn that means infarction and necrosis of the bowel. When that happens you have as additional causes of shock, septic contents of the loop of bowel, and impaired viability of the wall of the bowel that permits migration of toxins through the bowel wall into the peritoneal cavity, often with overwhelming toxicity.

Another thing to consider is that this second patient has been sick five days without fluid or

nourishment, plus loss of plasma into the lumen of the bowel, into the wall of the bowel, and into the mesentery of the bowel. In this patient attention should be focused on the patient as a whole and not just on the local pathology. The patient is far more important. She has a respiratory rate of 40 per minute, temperature of 100° F., pulse rate of 110 per minute. She has had a stroke and many other difficulties. When is a patient hopeless? This is a hopeless patient if I ever saw one; she has no chance. The mortality rate here is not 60 per cent but 100 per cent. Since it cannot be more than 100 per cent you may do what you can.

As for passing a rectal tube, it is more important to deflate this patient's bowel than in the younger patient who can wait a longer time for surgery. The chances for success here are almost nil because of the site of the torsion and the condition of the bowel.

The impression is that this is a complete block so that no tube or proctoscope will get through, so don't try too hard. Try once but not too hard. Actually, perforation has been reported with enthusiastic attempts to pass tubes. There is no doubt here of the presence of strangulation and necrosis of the bowel with peritonitis. The least, and in this case I believe the most, that you can possibly do here is to spend a few hours in preparation of the patient. This woman has vomited, which may indicate that the proximal small bowel and stomach also may be distended so that she will profit from decompression from above as well. Shock should be treated with large amounts of plasma, in addition to blood, saline, and large doses of a broad spectrum antibiotic. Then under local anesthesia, exteriorization of the bowel should at least be attempted, although it may not be possible.

Dr. Freeark: You have touched on a point of great controversy at this hospital. When do you operate upon a patient in shock? Given this situation of obstructed bowel due to volvulus and an associated volume deficit of the blood elements, which is more important in the persistence of shock, the blood volume defect or the gangrenous bowel, and how can you tell?

Dr. Crohn: Both are important. Much evidence has been collected to indicate that infection itself may be responsible for the shock. The total blood volume defect is important in that

it has an effect on the capillaries and organs throughout the body as well as locally. Shock due to sepsis from the gangrenous bowel will not be relieved by mere replacement of blood volume. Transfusions will not restore circulating blood volume because of the effects of the gangrenous bowel. Neither will removal of the gangrenous bowel by itself suffice.

Dr. Freeark: At what point do you feel the factor that is producing these toxins should be interrupted? What can we use as criteria to indicate that we have gone as far as we are going to go with blood volume replacement? If the patient does not come out of shock in four hours after fluid replacement what should we do?

Dr. Crohn: In the presence of persistent shock we can only guess at the amount needed to restore blood pressure. At least some replacement of the estimated volume defect and deficient electrolytes should help. Operation can only add to this patient's shock and she cannot withstand any more. That is why I have such a hopeless outlook in this case.

Dr. Freeark: Have you ever poured a considerable amount of blood and plasma into a patient with this picture and been unable to demonstrate any significant improvement of shock, but there will be dramatic improvement of shock upon resecting the gangrenous bowel?

Dr. Crohn: Yes, in a younger individual, but when the respiratory rate is 40 and the patient has all these other difficulties, the answer would be no.

Dr. Freeark: Dr. Nicholas, how do you feel about this problem of shock in bowel obstruction?

Dr. Nicholas: The rapidity and intensity of shock in volvulus are well known. This phenomenon probably is related to the mechanical factor of acute obstruction in the closed loop and later a simple obstruction proximal to the closed loop. As long as the bowel is viable, transperitoneal migration of its contents does not occur, but the most lethal factor in bowel obstruction is permeation of the gut wall whose viability is impaired. There is permeation by bacteria and other toxic agents through the wall. Also the blood loss factor becomes important in strangulating obstructions, especially where venous obstruction predominates, as it does when the mesentery becomes twisted. This is further ag-

gravated when increasing intraluminal pressure becomes great enough to occlude the veins. The rapid distention seen in sigmoid volvulus accomplishes this promptly.

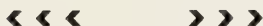
Dr. Freeark: As Dr. Crohn predicted, things were hopeless in this case. Not only was the twisted loop of sigmoid gangrenous, but the distal sigmoid down to the rectum had become gangrenous. It was impossible to exteriorize all the infarcted bowel, so complete resection of the sigmoid and rectosigmoid was done with terminal colostomy and a closure of the rectal stump as in Hartmann's procedure. Before closing the abdomen, the cecum was inspected and to our dismay showed evidence of gangrene but was free of perforation. It was exteriorized. As anticipated, the patient did not survive the operation.

There is another question we would like to

ask. Does the tube in these cases untwist this loop or does it just decompress it and leave it in a twisted state?

Dr. Nicholas: I suspect all you do is deflate the loop. The reason they get into repeated trouble is that the loop gets so big it cannot turn back. It becomes so big you cannot turn it back even when it is outside the abdomen. I think it is possible that if you can reduce the obstruction and get decompression, you may leave the patient not very far from where he was all along. I don't think you accomplish anything more in the way of decompression with detorsion.

Dr. Freeark: We should not close this discussion and leave the impression that this is a common disease. Yet both these patients were admitted to the hospital within a period of 24 hours.



The general practitioner

It seems to me to be fair to say that of all concerned in the National Health Service (in England), the general practitioner—who, in my opinion, has done most to make it work—has come out at the shortest end. To begin with, when—under the terms of the service—the general practitioner's practice was transferred from his own hands to that of the government, the ability of the established family doctor to move from one area to another in search of more lucrative practice, became sharply limited. Furthermore, with the abolition of the right of the practitioner to

sell his practice and good will, this desire, to date, to retire under the pensions allotted by the service has been dampened by the rather poor financial outlook, based on this relatively short membership in the National Service. Thus, with the rights of a physician to move his practice from one place to another, and with the growing reluctance of older physicians to retire because of their financial status, the situation of the young physician entering practice has deteriorated because openings available to him (except in medically depressed areas) have lessened steadily. *Perrin H. Long, M.D. Medicine under the State. Med. Times, Feb. 1959.*

EDITORIALS



Harold M. Camp dies

Dr. Harold M. Camp died of cancer on October 17, at the age of 74. He was secretary-treasurer of the Illinois State Medical Society for the past 35 years and editor of the Illinois Medical Journal since 1941. It is doubtful whether his long and arduous record of service to the physicians of Illinois will be duplicated in this generation.

Dr. Camp was born July 24, 1885 in Brooklyn, Schuyler County, Ill., the son of the late Dr. and Mrs. Julian E. Camp. He received his M.D. degree from Northwestern University Medical School in 1909. After interning at the Englewood Hospital, Chicago, he settled in Monmouth and remained active in the practice of medicine and surgery for many years. His interest turned gradually to organized medicine and after serving as councilor from 1922 to 1924, he was elected secretary-treasurer of the Illinois State Medical Society. He has served in the state organization as an ex-officio member of the Council and of the House of Delegates of the American Medical Association on various occasions.

During World War II, he served as state chairman for the Procurement and Assignment Service for Physicians under the War Manpower Commission. In June 1958, he was given Northwestern's Merit Award "in recognition of worthy



Harold M. Camp, M.D.

achievement which has reflected credit upon Northwestern University and her alumni." Last September 24, the Illinois State Medical Society's 50-year-service pin was presented to him at a special dinner in Monmouth.

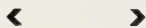
He was a past president of the Warren County Medical Society, and a member of the Monmouth Medical Club, the American Medical

Association, and World Medical Association. He also was a 50-year Mason, a Shriner, an Elk, and held membership in the Chicago Athletic Club. He was past president of the Monmouth Rotary Club and a member of the Monmouth Grace U.P. Church. He was an honorary member of the 50-year Club of the Texas Medical Association.

Dr. Camp is survived by a daughter, Mrs. Rudolph C. Rosine of Galesburg; a sister, Mrs. Harold Craig of Riverside, Cal., and two grandsons, Julian E. and Elon Rosine of Galesburg.

Several characteristics of Harold Camp will be remembered always by his close associates and staff. He was an inveterate smoker, walked with a brisk gate and erect carriage, despite an overloaded brief case. He loved to fish and his endurance for this sport was remarkable. He enjoyed driving his car, but commuted between Monmouth and Chicago via the Burlington Railroad. He was honored by the latter on his 2,500th trip as its most valued commuter.

Dr. Camp had a mind of his own and never hesitated to pursue to the end those ideas in which he believed. He was respected by his friends and enemies for his tenacity, tact, and perseverance. He was kind and fair to his employees. The members of the Illinois State Medical Society will always respect this humble but great physician. He gave and accomplished so much to the very end of his life. The banquet in his honor at McMichael Hall of Monmouth College shortly before his death was truly a fine tribute and splendid show of affection in appreciation from his many friends and colleagues.



What can be done for epilepsy?

Points to be remembered in order of their importance, are (1) recognition of the illness as a symptom of some disorder affecting the nervous system; (2) use of available diagnostic measures to prove or disprove the diagnosis and attempt to establish the cause; (3) acceptance of the condition by the patient and his family; and (4) utilization of total treatment consisting of drug therapy as well as adjuvant means, such as social, neurologic, and psychiatric measures, to rehabilitate the patient in all areas of society.

The important aspect is to recognize first of all that epilepsy is a symptom and not a disease

entity. It represents a manifestation of alteration in the function of the nervous system due to some previously existing injury, disease, vascular or metabolic disorder, or tumor. In the presence of any type of repeated alteration of consciousness or fainting, a diagnosis of epilepsy or a convulsive state must be considered. From personal experience, it seems there is a great reticence among physicians, medical students, and society to consider this symptom in the correct light. The conclusion is reached rapidly that heart disease or hysteria is responsible rather than epilepsy, even in the presence of the most characteristic signs.

Classically, epilepsy may lead to grand mal, petit mal, or psychomotor equivalent seizures. In a classical grand mal seizure, there is the aura, or warning, followed by a loss or alteration of consciousness, then a tonic, followed by a clonic state or convulsion in which incontinence may occur. Injuries also may result from falling. However, this classical chain of events is uncommon. Many times the only fact elicited, is that there is an alteration of consciousness in a paroxysmal disorder.

Actually, in a petit mal attack, that is all that really occurs—i.e., an alteration of consciousness for a brief moment, which may be accompanied by many other small signs such as movements of the lips or of the extremities. The family may describe only a blackout. This is another point: the epileptic rarely is able to tell what happened; he can tell only what someone else told him. Consequently, an account of the incident from a bystander or member of the family is significant. Even though many patients fall, few injure themselves for the number of times they fall. This is not easy to explain, but lack of injury does not mean that the patient is malingering or that he has hysterical epilepsy. Incidentally, hysterical and malingered epilepsy are very rare.

In psychomotor seizures, the patient's behavior may be bizarre — i.e., repeated temper tantrums, peculiar subjective symptoms, clouded states, and even psychotic behavior. It should be emphasized that epilepsy does not cause mental illness or deterioration, but there are illnesses that cause both mental and convulsive symptoms.

In establishing the diagnosis, a good history is essential. It should include what the patient can or can't tell you, what the family can tell you, or what any individual who witnessed the

attack can tell you as well as a thorough physical and neurological examination, X-rays of the skull, and electroencephalography. The E.E.G. may be the only laboratory finding that is abnormal; however, it may be normal even in the presence of a severe epilepsy. In any event, it should not change the diagnosis. Other diagnostic means may be necessary, such as spinal fractional pneumoencephalography, arteriography, and actual craniotomy in suspected cases of tumor. These examinations also may be needed to establish a possible etiological diagnosis.

The more we see of epileptic manifestations, the more we are convinced that they are all symptomatic, even though the etiology may not be obvious. In so-called idiopathic cases, all we can say is we do not know the cause, and in many, childhood illnesses may be the cause in a previously unrecognized encephalitis.

Once all diagnostic tests have been made, the next step is to discuss the seizure symptoms with the patient and the family as a manifestation of an illness. They should be encouraged to accept the condition as chronic, requiring observation and treatment by an interested physician who will see the patient at regular intervals, prescribe for him whatever drugs are deemed necessary, and treat all other associated or aggravating conditions. In all chronic conditions, including diabetes, allergy, and chronic heart disease, acceptance of the illness is necessary if treatment is to be effective. A frustrating part of chronic conditions is that the patient goes from physician to physician, and clinic to clinic, repeating all of the examinations, because he is looking for someone to say there is nothing wrong with him or give him a one-shot cure.

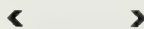
Once the patient's family accepts the situation, whether it pertains to a child or an adult, the next step is to explain the treatment. Thanks to modern research we have a group of drugs, that will not intoxicate patients. From experience, if any known drug, such as phenobarbital, Dilantin®, Mesantoin®, Tridione®, Paradione®, Milontin®, or even sodium bromide, is used adequately, remission of all seizures in up to 60 per cent of cases is possible. In another 20 per cent, more than one drug will be required to accomplish remission of all seizures. In the last 20 per cent of patients, the seizures are complicated by small seizures, such as petit mal and psychomotor seizures, which are difficult to stop but,

frequently they can be relieved. Remission of all seizures may be accomplished in the future with increased knowledge, and in some of these cases, neurosurgical excision of foci may be possible. Any associated or reactive personality disorders should be treated and not allowed to disable the patient. The family must not be allowed to make the patient an invalid.

The commonest errors in the handling of an epileptic is that he does not fully understand that he must remain under competent treatment; that there is no one-shot cure. If good results have been obtained from treatment, the patient or the physician may stop the medication inadvertently. Osler once said, "In a chronic condition, one treats the patient one day at a time."

In at least 80 per cent of all patients adequately treated, a normal life, with no restrictions of activities, can be expected. The epileptic can eat and work like anyone else with the exception that he should not be employed in a hazardous occupation. He can make plans for the future; can marry and have children. At present, there is more hope for the patient with epilepsy or a convulsive state than there has been in many years.

Alex J. Arieff, M.D.



The orphan of medicine

The English anatomist, F. W. Jones,* observed: "Man's foot is all his own. It is unlike any other foot. It is the most distinctly human part of the whole of his anatomical make-up. It is a human specialization and whether he be proud of it or not, it is his hallmark, and so long as man has been man and so long as he remains man, it is by his feet he will be known from all other members of the animal kingdom.

This observation has not altered the habits of abuse of the foot and of its neglect. That part of our skeleton has been studied only meagerly by the medical profession. Medical curricula and internship devote fewer hours to the foot than to any other part of the body; with only this cursory training we attempt to treat the problems of this organ.

Actually the human foot is anatomically and physiologically an ingeniously constructed organ. The first metatarsophalangeal articulation, for

*Jones, F. W.: *Structure and Function as Seen in the Foot*, London, Bailliere, Tindall & Cox, Ltd., 1944, p. 2.

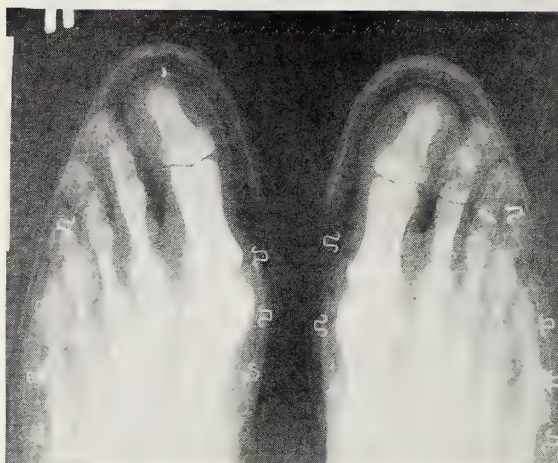
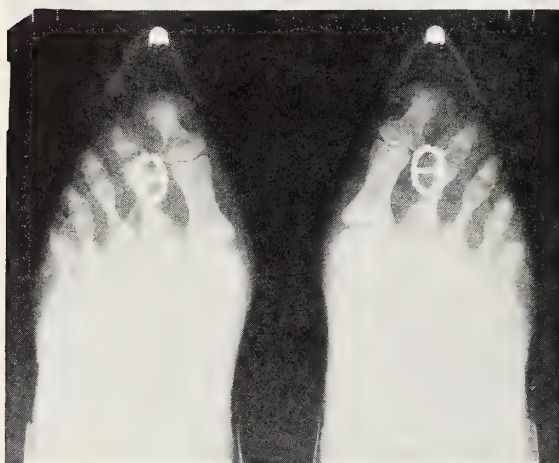
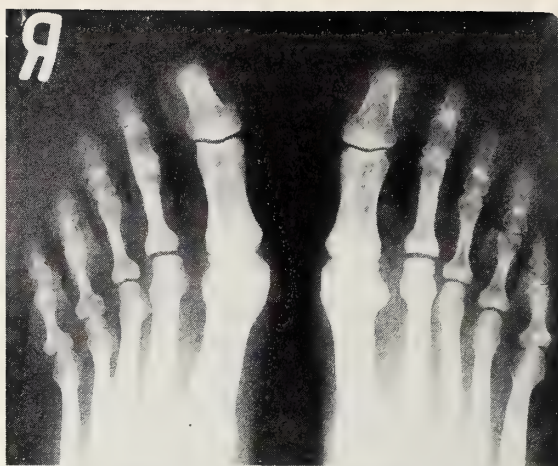


Figure 1. Patient, a woman, aged 37. A: Note roentgenographic appearance of both feet on weight bearing without shoes; B: same patient weight bearing while wearing shoes.

Figure 2. Patient, a man aged 51. A: Note roentgenographic appearance of both feet on weight bearing without shoes; B: same patient weight bearing while wearing shoes.

example, is one of the most complex joints in the body. It is subject to many diseases and deformities. A common deformity is enlargement around this joint, the cause and morbid anatomy of which rarely are the same in any two cases. Treatment generally is selected arbitrarily according to the particular surgeon's preference of one reported operative procedure over another. This selection of procedure is in contradistinction to surgical practice regarding all other parts of the body, for which the physician does not think it sufficient to learn a technique but rather makes it his first objective to understand the morbid changes taking place; only then does he choose a procedure.

Five times as many scientific articles have been published on the hand as on the foot notwithstanding the greater difficulties to which the foot is subjected. Major deformities of the foot,

such as talipes, have received studious attention; but these disorders comprise only a fraction of the multiplicity of foot disabilities. More than 60 per cent of the population in this country suffers from painful feet, induced mostly by shoes having a forepart with little resemblance to the size and shape of the feet on which the shoes are worn; 80 per cent of the shoes worn are the wrong size (Figures 1 and 2).

The bones of the foot are irregular in outline and are most prominent at the condyles. The restrictive action of the shoes ultimately produces pathologic alterations varying from minor excrescences to major static deformities. Once the disorder becomes static, removal of the cause—the ill-fitting shoe—often is insufficient to alleviate symptoms. Only correct diagnosis and appropriate treatment can give relief.

It is precisely because medicine has given the

foot relatively little attention that chiropody-podiatry has grown so rapidly. Medicine ought to adopt the orphan.

Henri L. DuVries, M.D.

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Cicero physician is named Illinois GP for 1960

Dr. John Colville Smith of Cicero has been selected by the Illinois State Medical Society as the "Outstanding General Practitioner for 1960."

The joint announcement by Dr. Joseph T. O'Neill of Ottawa, president of the ISMS, and the late Dr. Harold M. Camp of Monmouth, secretary, said the selection was based on Dr. Smith's "long time service to the public, his contributions to the betterment of medical care, and his devotion to community welfare."

A plaque emblematical of the honor will be presented to Dr. Smith at the society's annual meeting in Chicago next May.

Born March 29, 1897, on a farm at Redwood Falls, Minn., he developed a desire in childhood to become a physician, and often played at being "a doctor." He was graduated from Park College, Parkville, Mo., in 1917 and received his master's degree from Pennsylvania State College two years later.

He taught chemistry at Northwestern University for three years, but childhood ambitions reasserted themselves. He entered Northwestern University Medical School and obtained his M.D. degree in 1926. Working as a Yellow Cab driver at night for four years helped to pay his way through school.

After interning in St. Luke's Hospital, Chicago, Dr. Smith took up the practice of medicine at his present location. He affiliated with the MacNeal Memorial Hospital, Berwyn, and became a member of the attending staff in 1931. He has served as president of the staff on two occasions, has been an active member of numerous committees, and has been a driving force in the growth of the hospital from a 50-bed institution to one with 276 beds.

Denied enlistment in World War II because of an ulcer history, he served as an examining physician for the Selective Service System.

Dr. Smith has taken an active interest in medical society affairs. He is president of the Illinois Academy of General Practice, a member of the



John Colville Smith, M.D.

Council of the Chicago Medical Society, and a delegate to the Illinois State Medical Society. He also is a fellow of the American College of Surgeons and a member of numerous other medical organizations.

He has been an adult Bible class teacher at the Clement Presbyterian Church, Cicero, for the last 26 years and as an elder often has served in the pulpit in the absence of the pastor. He is a past president of the Cicero Kiwanis Club, a prominent worker in Community Chest drives, a Scottish Rite Mason and Shriner, and member of the Cicero Moose Lodge. His charitable work has been widespread. He has been especially interested in helping crippled and retarded children.

Dr. and Mrs. Smith were married in 1921. They have one son, Robert M., of Berwyn.

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There are two ways of being happy: We must either diminish our wants or augment our means—either may do—the result is the same and it is for each man to decide for himself and to do that which happens to be easier.

— Benjamin Franklin

Cardiac arrest

The first four minutes are vital for survival in cardiac arrest, according to Cole and Corday.* They analysed the time intervals of 132 cases and, of 78 who were treated within four minutes of diagnosis, 33 lived. When treatment was delayed beyond four minutes, only two of a group of 30 survived. In the remaining 24 cases there was disagreement on the time interval.

Four minutes passes quickly when cardiac arrest occurs even under ideal conditions. The anesthesiologist takes part of it, making certain the airway is open and the patient is getting proper oxygenation. After this is done the surgeon opens the chest and begins manual compression. None of these procedures takes four minutes but precious time is consumed in making the diagnosis. It is here that a monitor of the electrocardiogram may be lifesaving because it offers the first clew of cardiorespiratory embarrassment and of impending cardiac arrest.

Los Angeles is a big city but we need clarification on the large number of cases of cardiac arrest that occurred during a two year period. The analysis by Cole and Corday brings out many important factors. Premonitory evidence of cardiorespiratory embarrassment prior to the onset of complete arrest appeared in 36 (80 per cent) of the 45 instances in which the patient died but in none of those who survived. Hypotension, apnea, cyanosis, and variations in pulse were noted most often. Bradycardia was one of the earliest signs of trouble (20 to 40 beats per minute). In contrast, none of those who survived had signs of impaired cardiac or pulmonary functions.

These men have had considerable experience with cardiac standstill and conclude that even an internist should not attempt thoracotomy where surgeons and anesthesiologists are not readily available. One of the reasons is that the internist has no way to control the spurters that develop when the patient revives. They suggest that the internist apply electric countershocks to the closed chest. If the risk is so great under ideal conditions, what about penknife surgery when cardiac arrest takes place in the living room or on the street?

During arrest and in the postresuscitation period, certain drugs should be readily available.

In their opinion "the most effective drug in standstill is epinephrine, 1 to 2 cc. of a 1:1,000 solution diluted with 9 cc. of isotonic saline, injected into the cavity of the left ventricle. Small repeated doses should be used, as a single large dose may cause ventricular fibrillation. When epinephrine has failed, 2 to 4 cc. of a 10 per cent solution of calcium chloride has succeeded." The emergency drug tray for the operating and recovery rooms should contain also "atropine, lanatoside D, caffeine, levarternol, (1-norepinephrine) mephentermine, quinidine, calcium chloride, and potassium chloride."

The solution to the problem, according to the authors, may rest with early diagnosis and a more careful preoperative workup. Forty-four of the 45 cases who died had complications, such as recent coronaries, massive hemorrhages, ruptured peptic ulcers, or were in shock before surgery.

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Conference on aging attacks problems of medical care

Means to meet the problems of care of the aged were proposed at a well attended Conference on Aging in Springfield, September 27, sponsored jointly by the Illinois State Medical Society's Committee on Aging and the Committee for the Secretaries Conference.

Dr. Edward W. Cannady of East St. Louis, chairman of the Committee on Aging, summing up the conference, said:

"Medicine recognizes that adequate methods for financing health care for those 65 and over must be made available. Current experiments by insurance carriers and Blue Cross and Blue Shield plans indicate that solutions can be found."

Coverage is now being made available through: (1) continuation of group insurance for older, active workers; (2) continuation of coverage of retired persons and their dependents; (3) continuation on an individual basis of policies issued under group contracts; (4) effectiveness into advanced ages of pre-retirement coverage; (5) issuance of new contracts after the age of 65; (6) contracts which become paid up after age 65; (7) group policies covering retired persons, such as teachers and civil servants.

"It should be recognized that the majority of

*Cole, Seymour L., and Corday, Eliot: A.M.A. Arch. Int. Med. 104:37 (July) 1959.

the newer programs are experimental and subject to changes which will improve the protection," Dr. Cannady said.

A warning that the Forand Bill was still alive was sounded by Dr. Percy E. Hopkins of Chicago, a member of the AMA Board of Trustees and formerly chairman of the ISMS Committee on Medical Service and Public Relations. Dr. Hopkins predicted that the next session of Congress will see decidedly increased pressure from labor and welfare groups for such legislation. He said the medical profession must have the co-operation of ancillary, hospital, and nursing home services in providing medical care for senior citizens.

The need for such co-operation was brought home by figures presented by Mr. Peter W. Cahill, executive secretary of the Illinois Public Aid Commission. Mr. Cahill, reporting on the IPAC per capita payments for medical care of those on old age assistance in January 1959, said nursing home care accounted for \$13.14 and hospital care cost \$7.33. Drugs ran far behind with a per capita cost of \$2.99. Payments to physicians amounted to \$2.08. Clinic care, mainly in Chicago, totaled 90 cents.

Thus, the expense of hospital and nursing home care was seven times that of care by physicians. The greatest savings, therefore, must come through a reduction in institutional costs.

Mr. Robert T. Evans of Chicago, executive director of the Illinois Medical Service, pointed out that Blue Shield's membership includes about 6½ per cent who are 65 or over. This is the result of noncancellable features of policies because of age, no age limits on group participation, or for other reasons. Mr. Evans said the problem would be less pressing today if commercial insurance carriers had followed the same practice.

Mr. Kenneth K. Clark, executive director of Medical-Surgical Service of Illinois, reported that announcement will be made shortly by the Rockford plans that policies are available to those 65 and over.

Dr. Henry T. Ricketts, professor in the department of medicine, University of Chicago, stressed the importance of prevention and early detection of chronic illness in the aged. Dr. Ricketts said early detection is the responsibility of the physician, and that if he is to play his proper role two things must happen:

(1) People must be educated to seek the physician's services, if not prophylactically, then when ostensibly minor symptoms appear, and,

(2) many more physicians must be trained in proportion to our population.

Meanwhile, he said, much can be done at the community level by the laity, by the profession, and by local health departments, to further the public's understanding of disease to the end that the meaning of symptoms may be appreciated and medical advice sought before it is too late.

Miss Edna Nicholson, executive director of the Institute of Medicine, Chicago, listed five points of attack on the problem: (1) comprehensive, factual information; (2) combined efforts; (3) focusing of the planning on the requirements of the patient; (4) stressing of prevention and rehabilitation; (5) service at the greatest possible efficiency and economy.

Three points should be emphasized in a local survey, in the opinion of Vernon C. Pohlman, Ph.D., associate professor of sociology at the Illinois State Normal University. These are: (1) specific data on the local situation; (2) development of awareness of and interest in the problems of senior citizens; (3) a basis for initiating action.

Rehabilitation should be started in the hospital before a patient is sent to a nursing home or rehabilitation center, it was suggested by Dr. Edward E. Gordon, director of the department of physical medicine, Michael Reese Hospital, Chicago. Dr. Gordon also stressed the need for proper medical care and attention to nutrition in nursing homes.

Mr. John A. Hackley of Peoria, supervisor of the rehabilitation education services of the IPAC, reported on rehabilitation programs in nursing homes.

Home care programs have a major role in the providing of qualitative services to the chronically ill, Miss Pearl Ahrenkiel, R.N., of Springfield, chief of the bureau of nursing, State Department of Public Health, said. Economies over hospital or nursing home care are possible, but some outside financing is necessary, Miss Ahrenkiel said.

Miss Dorothy Campbell, R.N., of Peoria, home care co-ordinator of the Visiting Nurses Association, reported that while the Peoria Home Care Plan was experiencing increased

referrals by physicians, hospitals, and health and social agencies, there is need for still more participation by the hospitals. Also needed, Miss Campbell said, was planning for early patient discharge from hospitals.

There is an increasing need for nursing home beds, Mrs. Florence Baltz of Washington, Ill., president of the American Nursing Home Association, said. Among the problems of nursing homes are: attitudes toward them, lack of adequate financing and public assistance, lack of recognition by insurance companies, lack of interest on the part of physicians to care for patients in nursing homes, the need for trained personnel, and the need for accreditation.

Dr. Ruth E. Church of Springfield, deputy director of the State Department of Public Health, explained the law relative to nursing, shelter, and aged homes. The three categories, Dr. Church said, result in considerable confusion.

The AMA's six point program was presented by Dr. Frederick C. Swartz of Lansing, chairman of the AMA Committee on Aging.

Dr. Joseph T. O'Neill of Ottawa, president of the Illinois State Medical Society, welcomed those in attendance. Four other members of the Committee on Aging also participated in the program: Drs. P. V. Dilts of Springfield, Caesar Portes of Chicago, E. Lee Strohl of Chicago, and Joseph Mallory of Mattoon.

Dr. George C. Turner, president of the Chicago Medical Society and chairman of the Secretaries Conference, presided over the secretaries' portion of the program.

Midwest aging conference to be held in Kansas City

The Illinois State Medical Society and the state medical societies of Missouri, Kansas, Nebraska, and Oklahoma will participate in a regional conference on aging to be held in Kansas City, Mo., November 16-17, under the sponsorship of the AMA Committee on Aging and the five medical societies.

The purpose of the conference, to be held in the Hotel Muehlbach, is to explore the opportunities for positive health and meaningful living among older people, it was announced by Dr. Frederick C. Swartz of Lansing, Mich., chairman of the committee.

The specific objectives of the conference, Dr. Swartz said, are:

- (1) To appraise the significance of the longer life span and its impact on individuals and society;
- (2) To analyze relationships between social, economic, psychological, and physiological factors and the health of older persons;
- (3) To explore realistically the opportunities and needs created by a growing population of older persons;
- (4) To assess responsibilities of the individual and of both medical and nonmedical groups in dynamic approaches to the new era of aging.

The meeting will be attended by representatives of medicine, women's organizations, churches, labor, industry, government, and other groups interested in the health of the aging.

Reference pages

This issue of the Illinois Medical Journal includes a Summary of Changes in the July 1, 1959 Revision of the Rules and Regulations for the Control of Communicable Diseases. The material is printed on perforated pages that may be removed conveniently and filed for future reference. There is a growing need for information on where patients can obtain ancillary services for diagnosis and treatment of a wide variety of physical disabilities and diseases. Physicians usually spend many hours trying to find this type of information.

During the next two years we hope to cover the field and suggest that these pages be removed and filed in your office.

The AMWA meeting

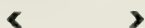
We went to St. Louis for the annual meeting of the American Medical Writers Association. We were sorry to learn that Dr. Swanberg was ill and unable to attend. This organization has made tremendous strides under his guidance and is now national in scope.

We were happy to see Dr. Lester R. Dragstedt, who had just received the 1959 MVMS honor award the night before. He and Mrs. Dragstedt were on their way to Gainesville, where he will take over as professor of surgery at the University of Florida.

Florida gains and Chicago loses because of

retirement rules. Dr. Dragstedt joins a long list of famous physicians and surgeons who continue to be productive long after retirement from their established departments.

We hope that the fruits of the writer's conference will become noticeable in future issues of IMJ.



Physicians and nutritionists consider better eating habits

Physicians and nutritionists considered ways to improve the eating habits of the public at a Conference on Nutrition held October 3 at the Western Illinois University, Macomb, under the joint sponsorship of the Committee on Nutrition of the Illinois State Medical Society and the Illinois Nutrition Committee.

Replacing candy and soft drink machines with protective food and milk dispensers would improve greatly the nutrition of children, according to Dr. Robert Jackson, professor and head of the department of pediatrics, University of Missouri Medical School, Columbia.

"The vicious practice of selling confectionery foods, especially in schools, to finance activities, should be discouraged," Dr. Jackson said.

He pointed out that deficiencies in diet frequently arise because sugar in the form of candy, soft drinks, other confectionery foods, and refined cereal products replaces the nutritionally valuable foods in the diet.

R. Bruce Kirk, Ph.D., professor of education, Jersey City State College, and formerly director of the continuing education services, American Dietetic Association, said some people are eager to change food habits but others are so settled in their ways nothing will change them.

Sermonizing or browbeating will not cause people to change, Dr. Kirk said. There must be a good reason, and they must have an idea of what the results will be.

Nutrition has its vogues, Miss Margaret A. Ohlson, Ph.D., director of the department of nutrition, University Hospital, State University of Iowa, Iowa City, told the conference. The awareness of obesity and its effect on health, has brought about a "wave of austerity," Dr. Ohlson said.

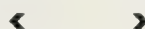
There also is a trend to try to equalize the

inadequacies of a dietary pattern with more and more concentrated doses of mineral and vitamin mixtures, she said.

There were six participants in a panel on "Teamwork for Better Nutrition." They were the three main speakers and D. K. Grissom, Ph.D., associate professor of the department of health education, Southern Illinois University, Carbondale; Mrs. M. A. Tarulli, director of nutrition, Infant Welfare Society of Chicago; and C. Edith Weir, Ph.D., chief of the division of home economics, American Meat Institute Foundation, Chicago.

The presiding officers were Dr. Paul A. Dailey of Carrollton, chairman of the ISMS Committee on Nutrition, and Miss Dorothy Lucke, Ed.D., of DeKalb, chairman of the Illinois Nutrition Committee.

Greetings were extended by Dr. Lee N. Hamm of Lincoln, first vice president of ISMS; Rolf W. Larson, Ed.D., of Macomb, dean of the School of Education, Western Illinois University; and Dr. Kenneth T. Pawlias of Macomb.



Retarded children

November is a busy month for special weeks and days. Diabetes Week runs from the 15 to 21 and November 16 marks the opening of the annual Christmas Seal sales. The drive for retarded children will be observed from 15 to 26.

The National Association for Retarded Children gears its annual campaign to conclude on Thanksgiving Day "in appreciation of the forward strides being made in improving the chance of the mentally retarded to lead happy, useful, and satisfying lives."

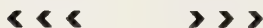
Innumerable research projects are being conducted all over this land on the various aspects of this problem. A breakthrough has occurred in some areas, such as the inborn errors of metabolism. The IMJ's July 1958 issue carried a guest editorial by Dr. David Yi-Yung Hsia, director of the Genetic Clinic at Children's Memorial Hospital, Chicago. He stressed the progress being made in the field of biochemical genetics in the approach to the various inborn errors of metabolism. In phenylketonuria, for example, which is responsible for two to five per cent of institutionalized mentally defective children, a diet free of phenylalanine, if started early in in-

fancy, can prevent mental deficiency in these children.

Various disorders that lead to mental retardation were discussed at the first International Conference on Mental Retardation held in Portland, Maine last July. Dr. Hsia, who has written a book on the subject, mentioned some 70 forms of inborn errors of metabolism that are now known. The list of diseases resulting from these errors included maple sirup disorders, cretinism,

and galactosemia as well as phenylketonuria. Other areas of discussion included investigations of the electrolytes and pH in newborns, oxygen metabolism, hepatolenticular degeneration, mongolism, and erythroblastosis.

It is apparent that scientists are approaching the serious problem of mental retardation from various angles and that the layman is doing his part through the NARC, with its 682 member units to help the estimated 11½ million children so afflicted.



Inflation

These results, reported here for the first time, while constituting overwhelming evidence in support of the Keynes-Fisher reasoning about the bias in interest rates during inflation, fail to support their conclusion that business firms gain through inflation. The frequency of debtors in the business population is not great enough to justify the Keynes-Fisher sweeping statements about the gains of business enterprise through inflation. This evidence also suggests that the Keynes-Fisher theorizing about the effects of inflation is not specific to business enterprises; it is a general theory of wealth transfers caused by inflation and is equally applicable to individuals. What count are monetary asset and monetary liability positions and not the type of economic activity in which one engages.

Especially pertinent to much of the current discussion of the consequences of inflation is

that the present evidence, by validating and wealth-transfer effect from monetary creditors to monetary debtors (and rejoicing the wage-lag hypothesis), verifies the implication that inflation is basically a "tax" on creditors in favor of debtors. Inflation constitutes a tax on the wealth of individuals to the extent that they are holders of money-type assets rather than savers, wage-earners, businessmen, widows, orphans, or retired school teachers.

These results have implications for the adjustment of personal investment and wealth portfolios (including not only stocks but bonds, life insurance, mortgages, charge accounts, cash holdings, and so on) in order to hedge against inflation or to profit if inflation comes. Similar reasoning applies to the management of investment, pension, and trust funds. *Armen A. Alchian and Reuben A. Kessel. Redistribution of Wealth through Inflation. Science Sept. 4, 1959.*

Questions and Answers on Narcotic Act

The Committee on Narcotics will be happy to answer additional questions concerning the use of narcotics under the new state law. They will be answered in this column in forthcoming issues.

Ques.: What type of prescription blank does a practitioner use in writing for an ophthalmic solution of dionin?

Ans.: The official prescription blank should be used for straight dionin or solutions such as plain ophthalmic solutions.

Ques.: Is an oral prescription ever permissible for dionin?

Ans.: Yes. Oral prescriptions are permissible for combinations of dionin, or its salts, with one or more active nonnarcotic ingredients in therapeutic amounts where the content of dionin does not exceed one-sixth grain per dosage unit, or one and one-third grain per fluid ounce.

Ques.: What is the oral prescription law?

Ans.: Prior to August 1954, the federal narcotic laws and regulations required a pharmacist to have a written and signed prescription of a duly qualified and registered practitioner in his possession before a narcotic medicine, other than an exempted preparation, could be dispensed to a patient. Then Public Law 720, 83d Congress, was approved August 31, 1954. This law provides that a pharmacist may, upon compliance with certain specified requirements, accept and fill oral prescriptions of qualified practitioners for such narcotic drugs or preparations as the Secretary of the Treasury shall find and designate by regulation to possess "relatively little or no addiction liability."

Ques.: What type of drugs or preparations fall under the oral prescription category?

Ans.: Class B narcotic drugs.

Ques.: How can we be certain that a drug or preparation is authorized to be dispensed on

an oral prescription?

Ans.: The pharmacist can check the label as manufacturers of narcotic drugs are now required to indicate Class A, Class B, or Class X narcotics on the label.

Ques.: Is it necessary for a pharmacist to send copies of the oral prescriptions to the physician's office for his signature or for the physician to go by the drug store and sign them?

Ans.: No. It is not necessary, either under federal law or state law, to follow up oral prescriptions by signed prescriptions. The pharmacist must reduce the oral prescription to writing and keep it on the narcotic file. This prescription must show the name of the physician and other necessary information.

Ques.: Should a practitioner write out the name of the narcotic drug on the prescription each time instead of indicating "refill prescription No. so and so"?

Ans.: Prescriptions should be written out each time, showing name of narcotic and amount, as the prescription might have to be taken to a pharmacist other than the one who filled the first prescription and assigned the original prescription number. Also the Division of Narcotic Control is not able to tabulate such a prescription unless the narcotic and the amounts are shown.

Ques.: What is the ruling on partial filling of narcotic prescriptions?

Ans.: As a rule, partial filling of narcotic prescriptions is not permissible. If, however, a pharmacist is unable to supply the full dose called for in a written or an oral prescription and an emergency exists, he may supply a portion of the drugs called for by the prescription, provided he makes a suitable notation on the face of the written prescription (or written record of the oral prescription) of the quantity furnished. The reason for not supplying the full quantity

should be on the back of the written prescription and he should inform the issuing practitioner thereof. No further quantity shall be supplied except upon a new prescription.

Ques.: Is a practitioner required to write a prescription to cover narcotics dispensed from his office?

Ans.: No. Practitioners may dispense narcotic drugs to bona fide patients pursuant to the legitimate practice of their profession without prescriptions or order forms but shall keep a record showing the kind and quantity of narcotics dispensed or administered and the name and address of each person to whom dispensed or administered.

Ques.: Is it permissible for a physician to change the name and address on an official order form for narcotics or request a wholesaler to send the narcotics to a different address?

Ans.: No. The name and address shall not be changed by either the purchaser or consignor in any manner whatsoever. The merchandise requested on the form may be sent only to the person designated by the Director of Internal Revenue and at the location specified by him.

Ques.: A physician, when preparing his order form for narcotics, discovers an error in the number of packages desired and changes this number. Is the wholesaler allowed to fill this order?

Ans.: No. No alteration, erasure, or change of any description may be made in any order. The merchandise requested on an order form may not be furnished if the form shows any alteration or erasure, or evidence of any change whatsoever. If an order is not properly prepared in every respect, it must be returned to the vendee.

Ques.: What should the vendee do with an order that has been returned?

Ans.: When received by the vendee, the returned original and the letter of explanation shall be attached to the duplicate and retained on file.

Address your queries to the Editors of the Journal or to Jacob E. Reisch, M.D., chairman, Committee of Narcotics, Suite 1909, 185 N. Wabash Avenue, Chicago 1.

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Heparin therapy

It has been amply demonstrated that heparin and related substances activate a clearing factor (lipoprotein lipase) that is capable of modifying the abnormal lipid pattern of atherosclerosis temporarily. Although animal experiments have been suggestive of a beneficial effect in diet-induced atherosclerosis, definitive human evidence

of benefit is not available. Several considerations make long term heparin therapy impractical: (1) Parenteral administration is essential (sublingual heparin probably is adequate in subjects with abnormal lipid pattern), (2) at present the cost of this drug is beyond the means of all but the most wealthy patient. *Frank W. Davis, Jr., M.D. Some Newer Concepts in Medical Treatment of Atherosclerosis. Maryland M.J. Aug. 1959.*

Now You Can Will Your Body to Medical Research

The Illinois General Assembly, at the request of the ISMS, enacted into law HB 6 and HB 156 which establishes the right of a testator to dispose of his body. Both bills were signed by the Governor on July 10th. HB 6 is as follows:

"Sec. 42a. (Gift of Body): 1. Every person of testamentary capacity may give by will or other written instrument executed during that person's lifetime, the whole or any part of his body to a charitable, educational, or research institution, university, college, state director of public health, state director of public welfare, legally licensed hospital, or any other organization intended and equipped to distribute human bodies or parts thereof, either for use as such institution, organization, university, college, director, or hospital may see fit, or for use as expressly designated in the will or other instrument, and the gift shall become effective immediately upon death.

"2. If the instrument making the gift does not purport to be a will, it shall be executed by the donor or by some person in his presence and by his direction, and attested in the presence of the donor by two or more credible witnesses. The instrument shall become effective immediately upon the donor's death, and no person acting in good faith pursuant to the direction of the instrument and without knowledge of a subsequent revocation thereof shall be liable for so doing, notwithstanding the subsequent revocation in whole or part by a will, codicil, or other instrument executed in accordance with this Section.

"Sec. 79. (Power of Executor Before Issuance of Letters): Before issuance of letters to an executor, his power extends to the carrying out of any gift of the decedent's body or any part thereof, to the burial of the decedent, the payment of necessary funeral charges, and the preservation of the estate; but if the will

is not admitted to probate the executor is not liable as an executor of his own wrong, except for his refusal to deliver the estate to the person authorized by law to receive it or for waste or misapplication of the estate."

HB 156 is a companion bill to HB 6 and recognizes the right of a person in the custody of a correctional institution, etc. to make testamentary disposition of his body or any part thereof as provided under HB 6.

Without reviewing the literature, there seems to be little doubt that medical schools and research institutions are hampered seriously by a continuing shortage of anatomical material for teaching and research purposes. The Bulletin for Medical Research, 10:22 (Nov.-Dec.) 1955, published by the National Society for Medical Research, contains a table indicating that in most medical schools (61) there is only one cadaver for each four students. There is no question but that research is being held back by an inadequate flow of anatomical material. Furthermore, there is a growing need for fresh tissues for transplants.

Prior to the enactment of this legislation there existed some ambiguity as to whether or not a testator could dispose of his body by will. In the case of *Mensingers vs. O'Hara, et al.*, 189 Ill. App. 48 at p. 53, the court impliedly recognized such a right by saying "the custody and possession of the remains, and in the absence of any testamentary disposition, belongs to the surviving husband or wife, if any, or if there be none, then to the next of kin." However, in the only case in which the issue was squarely presented, *Fischer's Estate Vs. Fischer*, 1 Ill. App. (2d) 528, 117 N. E. (2d) 855, the court refused to enforce a provision in the will providing for burial in a particular cemetery.

HB 6 sets forth two modes for making testamentary disposition of the body or any part

thereof: 1) by will, 2) by a written instrument not purporting to be a will. In using the will as a vehicle it would appear that a simple clause in the will would suffice. It might read as follows:

“I give and bequeath my body to the XYZ School of Medicine to be used as it sees fit, and I hereby direct my executor to carry out this gift as soon as practicable.”

In utilizing the second method of testamentary disposition, you will note that the statute, while dispensing with the other requirements for making a will, retains the requirement that there be two witnesses. It need not be signed personally by the donor. It is sufficient if it is signed by some person in his presence and in the presence of two or more credible witnesses. It would appear, therefore, that if a donor is physically unable to execute the document but is mentally alert, and knows what he is doing, he may direct someone else to sign his name but this should be done only in the presence of two or more credible witnesses. The consent for gift of body might take the following form:

Chicago, Illinois
September 12, 1959

I hereby give my body to the John Doe Medical School of Chicago, Illinois, said gift to take effect immediately upon my death and to be used by said school for teaching or research purposes as it shall see fit.

Robert Smith (Seal)

The foregoing instrument was on the day of its execution signed and sealed by the donor, Robert Smith, or under his direction, in our presence and by him to us declared to be a testamentary disposition of his body and we, at his request, in his presence as witnesses, and in the presence of each other, have hereunto subscribed our names as witnesses, and we do certify that at the time of execution of the foregoing gift, we verily believed said donor to be of sound and disposing mind, memory and understanding.

(Seal)	
Name	Address
	City and State
(Seal)	
Name	Address
	City and State

The consent for gift of part of body might take the following form:

Chicago, Illinois
September 12, 1959

I hereby give to the American Eye Bank, Illinois Hospital of Chicago, Illinois, either or both of my eyes to make such use thereof as it shall see fit, said gift to take effect immediately upon my death.

Robert Smith (Seal)

The foregoing instrument was on the day of its execution signed and sealed by the donor, Robert Smith or under his direction, in our presence and by him to us declared to be a testamentary disposition of his eyes, and we, at his request, in his presence as witnesses, and in the presence of each other, have hereunto subscribed our names as witnesses, and we do certify that at the time of execution of the foregoing gift, we verily believed said donor to be of sound and disposing mind, memory and understanding.

(Seal)	
Name	Address
	City and State
(Seal)	
Name	Address
	City and State

It should be noted that the new procedure 1) creates a right in the testator to make disposition of his body or any part thereof without the consent of next of kin, and 2) imposes a duty upon the executor to carry out the terms of the gift immediately upon death, and 3) saves the executor, or other person who acts in pursuance of the gift, from liability for so doing, even though the gift may have been revoked subsequently by will, codicil, or other instrument executed in pursuance to the statute, provided such person was acting in good faith. It would appear, therefore, that written consent of the next of kin is not required but it is suggested that if the same can be obtained it might be well to do so. The statutory procedure simplifies the making of the gift 1) where there is no next of kin and 2) where the next of kin do not consent or there is disagreement among them. One form of consent for next

of kin which could be used by a tissue bank is as follows:

Name of Tissue Bank
Address

FOR PERMISSION TO USE EYES

I, _____ of _____,
Relationship Name of Donor
do hereby give permission to the _____
hospital of _____ and/or the _____
Eye Bank to remove either or both eyes from said
donor (deceased) to be used for such purpose as
the Hospital or the _____ Eye Bank
may see fit.

Witness Signature

Witness Date

The statute recognizes that if the anatomical material is to be of any use it must be available immediately upon death. Accordingly, the executor is charged with the duty of carrying out the terms of the gift and he is protected against suit in the event the next of kin do not consent or should another will or written instrument subsequently turn up which revokes the gift. It would appear to be in order for the testator to inform his executor prior to death of his intention to make a testamentary disposition of his body so that the executor can be prepared to comply. The attorney for the testator should so advise the

testator and assure him he will not be personally liable for doing so. While the statute protects the executor or other persons acting in pursuance to the direction of the gift, and which language would appear to cover employees and agents of the donee, it should be emphasized that such immunity arises only where the executor or other person acts in good faith. There must be no fraud or misrepresentation; and knowledge of the revocation of the gift would incur liability.

It has been suggested that inasmuch as the Act contains no provision for enforcing the testator's wishes that the testator could, if he saw fit, penalize his heirs for failure to carry out his wishes. He could accomplish this by including a statement in his will to the effect that, "I have on the _____ day of _____ provided for the postmortem disposition of my body for scientific purposes. I hereby cancel any bequest or devise contained in this will to any beneficiary who in any way contests or hinders such disposition."

This legislation was offered by the ISMS to stimulate the flow of cadavers to teaching institutions and to make more anatomical material available to tissue banks. It is hoped that responsible organizations interested in this field will acquaint the public with the information that a vehicle has been established in Illinois whereby they can donate their bodies to medical science.

Walter L. Oblinger
Associate Counsel
Springfield

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Postradiation enteritis

After patients have had extensive roentgen therapy to the abdomen for malignant or other diseases—often many years after—a constrictive inflammatory lesion may develop in a segment or segments of the small intestine. This cannot be differentiated either clinically or roentgenologically from regional enteritis, but in such cases the history is of the greatest importance.

The physician should inquire specifically as to what amount of roentgen therapy the patient has received. Occasionally such patients bleed massively or a bowel obstruction develops, and at the time of surgical exploration, a scarred segment of bowel is demonstrated. Areas of telangiectasia, so commonly seen after radiation therapy directed to other regions, are readily demonstrated. *J. Arnold Bargen, M.D. Inflammatory Disease of the Small Intestine. J. Oklahoma M.A. July 1959.*



Insurance Benefits

Approximately 190,000 more men, women, and children started drawing monthly old-age, survivors, and disability insurance benefits in the past 12 months as a result of amendments to the social security law which went into effect in August 1958, Secretary of Health, Education, and Welfare Arthur S. Flemming announced today. Secretary Flemming pointed out, however, that many other persons made eligible under the amendments either may be unaware of their rights or may not understand that they must file application before payments can begin.

Persons who became eligible for benefits beginning last September and do not apply for them before the end of this September will fail to receive a months' back benefit for each month after September in which they fail to make application. The law provides back payments for a period no greater than 12 months before the month an application is filed.

The largest group made eligible for benefits beginning September 1958 are the dependents of disabled workers. Although disabled workers aged 50 to 65 have been eligible for benefits since July 1957, payments could not be made to their dependent families until the 1958 amendments were enacted. During the past year, 126,000 such dependents were added to the social security benefit rolls, Secretary Flemming said. About 50,000 additional disabled workers have been awarded monthly benefits under a provision in the 1958 amendments that eased the work requirements for persons applying under the dis-

ability insurance provision and at the same time extended to June 30, 1961, the deadline for the filing of applications by persons with long-standing disabilities.

Prior to September 1958, disabled workers had to meet two work requirements to qualify either for disability insurance benefits, for those between the ages of 50 and 65, or, if they were under age 50, to have their social security records frozen. They needed social security credit for at least five out of the 10 years before becoming disabled, and for at least one and one-half out of the three years preceding disability. Under the 1958 amendments, social security credit for one and one-half out of the last three years is no longer required.

The 1958 amendment extending the deadline for the filing of disability applications gave workers whose disability may have begun as far back as 1941 until June 30, 1961 in which to apply to have their social security records frozen as of the time they actually became disabled. Under the old law, where an application was filed after June 30, 1958, the worker's disability, for social security purposes, was considered to have begun no earlier than 12 months prior to the filing date.

Some 3,000 aged dependent parents of workers who died since 1939 have been added to the benefit rolls as the result of a 1958 change in the law which permits the payment of benefits to dependent parents, even if the worker were also survived by a widow, widower, or child.

Many additional parents believed to be eligible under this provision of the law have not yet applied for benefits perhaps because they were denied benefits in the past and have not learned of the new change in the law.

A disabled son or daughter, 18 years of age or older, of a retired or deceased parent may now qualify as a dependent under the 1958 amendments, even though he or she had been receiving less than the previously necessary one-half support from the parent. During the last year more than 10,000 disabled persons have been able to qualify for benefits for the first time because of this amendment.

A number of other amendments in the law made last year changed the eligibility requirements for the payment of dependents and survivors benefits. Some of these changes permit the continuation of benefit payments where one beneficiary marries another. Another permits the payment of mother's benefits where a child has been adopted by his stepfather, even though the

mother had been married to the stepfather for less than one year at the time of his death. Still another permits payment of benefits to children where a retired worker has had an adopted child for less than three years.

In the 12 months since the 1958 amendments became law the Social Security Administration, through its 584 district offices, has been carrying on a wide variety of public information and other activities to find these people and inform them of their rights. In many situations, however, there are no records through which they may be located.

Persons who believe that they may be eligible for benefits under any of the 1958 changes in the social security law should contact their nearest social security district office promptly to learn their rights and make application for any payments due them.

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Social Security Administration

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Out of this world

For the moment, the two areas in which it appears insurance will be needed first are indemnity for large hazardous risks by companies already involved in the missile space programs, and liability for damages caused by falling space objects. The U. S. State Department's legal adviser, Loftus E. Becker, is pushing in the UN for an international space code containing provisions on the latter. The risk potential is fantastic. The impact of fragments from a single disintegrated missile for instance would be suffi-

cient to destroy the Empire State Building, according to New York attorney William A. Human, co-chairman of the Inter-American Bar Association's Committee on Interplanetary Space.

Despite such frightening possibilities, don't dismiss anything about outer space as impossible or implausible. Just remember that almost 500 years ago a single man opened up a whole new world and gave the old world a push without even knowing what he was doing. His name was Christopher Columbus. *Outward to New Worlds*. *J. Am. Insurance*. Sept. 1959.

CORRESPONDENCE



Clinics for crippled children listed for December

Nineteen clinics for Illinois' physically handicapped children have been scheduled for December by the University of Illinois, Division of Services for Crippled Children. There will be 15 general clinics providing diagnostic orthopedic, speech, and hearing examination along with medical, social, and nursing service; two special clinics for children with rheumatic fever and one each for children with cardiac conditions and cerebral palsy. Clinicians are selected from among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

December 2 — Alton (rheumatic fever), Alton Memorial Hospital

December 2 — Carmi, Carmi Township Hospital

December 2 — Champaign-Urbana, McKinley Hospital

December 2 — Hinsdale, Hinsdale Sanitarium

December 2 — Rock Island (cerebral palsy),

Foss Home, 3808 Eighth Avenue

December 3 — Springfield, St. John's Hospital

December 4 — Chicago Heights (cardiac), St. James Hospital

December 8 — East St. Louis, St. Mary's Hospital

December 8 — Peoria, Children's Hospital

December 9 — Elgin, Sherman Hospital

December 10 — Carlinville, Carlinville Area Hospital

December 11 — Evanston, St. Francis Hospital

December 15 — Belleville, St. Elizabeth's Hospital

December 15 — Effingham (rheumatic fever), St. Anthony Hospital

December 15 — Peoria, Children's Hospital

December 16 — Chicago Heights (general), St. James Hospital

December 17 — Bloomington, St. Joseph's Hospital

December 17 — Elmhurst, Memorial Hospital of DuPage County

December 17 — Rockford, Rockford Memorial Hospital

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Senior citizen prepayment plan offered in Rockford area

A newly developed senior citizens health program for protecting the elderly in the Rockford area against the cost of health care has been reported by the Blue Shield Plan, Medical-Surgical Service of Illinois, Rockford.

The Rockford Plans have been engaged in research preparatory to the development of senior certificates for more than a year and a half. Some of the results of this study, Mr. Kenneth

K. Clark, executive director, pointed out, showed: 55 per cent of individual, nongroup members who are over 60 accounted for 69 per cent of the total hospital admission, used 80 per cent of the total bed days, and benefited by 79 per cent of the dollar amount paid by Blue Cross for the entire group.

"Our committee, in the development of this program, decided that the age limit in the offering of this program would be 60 upward instead of 65 years of age," Mr. Clark said. "This will be, in effect, offering the program at a somewhat lower rate, since experience between 60 and 65 years of age is not as adverse as it is past 65 years of age."

The certificate will be available on an individual, nongroup subscriber basis, at a cost of \$23.-20 a year and will include liberal surgical benefits for procedures in a hospital, a physician's office, or clinic; in-hospital medical visits (120 days per contract year); X-ray examinations in a hospital or physician's office; radiation therapy and radioactive isotopes; surgical assistants; intensive medical care; and the administration of an anesthetic.

Mr. Clark said Illinois Hospital Service, Inc., Blue Cross Plan, Rockford, soon will also have available a companion senior citizens program for hospital benefits.

Venereal disease symposium

The 11th annual Symposium on Recent Advances in the Study of Venereal Diseases will be held at the Palmer House, Chicago, April 7-8.

The meeting, sponsored jointly by the American Venereal Disease Association and the Public Health Service, will follow a Venereal Disease Seminar for public health personnel that begins April 4.

Anyone desiring to present a scientific paper on venereal diseases should mail a preliminary abstract before November 25 to Dr. William J. Brown, program committee chairman, in care of the Venereal Disease Branch, Communicable Disease Center, 50 Seventh Street, N.E., Atlanta 23.

Angiology meeting in Mexico

The International College of Angiology will hold its first regional meeting in Mexico City, December 29-30. The scientific program, consisting of 20 papers and four round table breakfasts and luncheons, will cover arterial occlusion diseases and thrombo-embolic phenomena.

Further information may be had by writing to the college, 151 East 83rd Street, New York.

Symposium on neoplasia

The University of Texas M.D. Anderson Hospital and Tumor Institute will hold its 14th annual symposium on fundamental cancer research, "Cell Physiology of Neoplasia," in Houston, February 25-27.

The program will cover morphology of cells, behavior of organelles, submicroscopic structures, cytochemistry, growth phenomena, and biochemical properties of cells. Further information may be had by writing to the editorial office, University of Texas M.D. Anderson Hospital, Texas Medical Center, Houston 25.

Conference on sports medicine

A National Conference on the Medical Aspects of Sports will be held in Dallas, November 30, under the auspices of the AMA.

The program will consist of lectures, panels, and discussions covering physiology and pharmacology of exercise, training, and conditioning of the athletics, and prevention and treatment of injuries.

Obstetrics board examination

Part I examinations of the American Board of Obstetrics and Gynecology will be held in various parts of the United States and Canada, January 16. A bulletin outlining present requirements may be had by writing to the secretary, Dr. Robert L. Faulkner, 2105 Adelbert Road, Cleveland 6.

AT THE EDITOR'S DESK



ACCIDENTS

In the past it was startling to hear that motor vehicle accidents killed more people in the United States in the first six months of this year than did polio, measles, scarlet fever, whooping cough, and diphtheria combined. The Metropolitan Information Service informed us recently that more are killed in auto accidents in six months than the combined deaths for the previously mentioned diseases during the past six years.

Catastrophes are regarded in insurance circles as accidents in which five or more persons are killed. In the first six months of this year 750 lives were lost in this manner. The airliner that crashed into the East River in New York City on February 3 was one of the most costly; 65 deaths resulted from this mishap. Three months later, 31 were killed when another scheduled plane disintegrated in midair during a thunderstorm near Baltimore.

The loss of life in military aviation catastrophes decreased appreciably this year according to the Metropolitan Information Service, reaching the lowest point in 10 years. Bus accidents took fewer lives, whereas catastrophes involving other types of motor vehicles took a greater toll than a year ago.

CARDS FOR BLEEDERS

The Abbott Laboratories is making available emergency identification cards for persons under treatment with anticoagulants. The cards, in pads of 10, are being distributed to physicians

on request. Write Professional Services, Abbott Laboratories, North Chicago, Ill.

FISH BLOOD TYPES

A University of California biologist told the International Oceanographic Congress that fish, seals, and whales have different blood types. Salmon, sardines, herring, and the commercial fish can be identified as belonging to one or another ethnic group.

Blood typing of fish is most helpful in tracing movements of fish at sea during migrations. The technique is the same as for humans except perhaps that they don't stand in line to have it done. The Japanese are beginning to apply the method for the study of the social habits of whales. It sounds like a whale of a job but may bring to light many factors on the origin of different schools.

GROUP PRACTICE

The house of delegates of the AMA defines group practice as: "... the application of medical service by a number of physicians working in systematic association, with the joint use of equipment and technical personnel and with centralized administration and financial organization."

NEW INSTRUMENTS

The American Optical Company has a new bedside device for hemoglobin determination. The Hb-Meter is a pocket sized instrument that does the job in less than three minutes.

PHARMACEUTICALS

Lilly continues to experiment with a new tasteless salt of propionyl erythromycin in the hope that it can be formulated into a pleasantly flavored aqueous suspension. The product will be known as propionyl erythromycin lauryl sulfate (PELS).

News releases on Altafur (Eaton) continue to appear since its debut at a symposium on antibacterial therapy held by the Michigan and Wayne County Academies of General Practice. The drug is neither an antibiotic nor a sulfonamide and was reported to be especially effective against *Staphylococcus aureus*. It is the first nitrofurane with a broad spectrum of antibacterial action against a wide range of infections throughout the body. It is readily absorbed from the gastrointestinal tract and if the claims being made for it are substantiated, it should prove to be an important new antibacterial agent. This drug differs from Furadantin in that it gives high blood levels and low urine levels. Undesirable side effects such as nausea and vomiting occur in from one to 10 per cent of the patients. These symptoms are minimized by giving the drug with meals. There have been no toxic reactions to date.

A seaweed extract may become an effective ulcer remedy if it passes the usual clinical tests. At a recent convention of the American Chemical Society, Dr. John Houck, the Washington biochemist described Carrageenin, which blocks the action of pepsin and inhibits peptic ulcer induced in rats and dogs. Much more work is needed before the extract is available for clinical trial. It is not very soluble in water and is helpful only within certain ranges of stomach acidity.

Niamid, Pfizer's new psychotherapeutic agent, is called a mood brightening drug. A news release says it "has proved to be particularly effective in helping depressed elderly patients."

Phenoxene is Pitman-Moore's new synthetic compound for use in the symptomatic treatment of all types of parkinsonism. The manufacturers claim it "decreases muscular rigidity, improves gait, posture, and autonomic reflexes, counteracts tiredness and weakness, and relaxes muscle spasm and cramps." It does not "even in maximum doses, increase intraocular pressure or aggravate



Toledo's 6 story Crestview Club apartments for senior citizens is scheduled for January occupancy. This project, sponsored by Flower Hospital (Methodist) was mentioned in the August, 1959 issue of I.M.J.

glaucoma." The usual dose is one 50 mg. tablet three times a day.

Merrell's cholesterol inhibitor, triparanol (MER-29) was touted widely in newspapers and magazines several months ago. Their stock went up and so did the hopes of all hypercholesterolemic patients.

We are now on the second round of news releases containing fact sheets and reprints. According to the report, triparanol lowers serum cholesterol in 86 per cent of the patients with an average reduction of 55 mg.%. This fall is reached by the fourth week of therapy on a single daily oral 250 mg. dose. The drug inhibits the biosynthesis of cholesterol.

But the product is not yet available for prescription use. The manufacturer has had wide publicity on this drug and probably wants it to remain in the limelight despite the fact that it is not on the market. Time will tell if it lives up to the reputation built up by Wm. S. Merrell.

Parke-Davis' president, Harry J. Loynd, asked the druggists of America to expand and improve the scope and quality of their services to offset the rising public resentment concerning the high cost of medicines. He branded the idea of high drug costs as a misconception, and had statistics to prove it. He recommended a "mutual professional program of public information and communication based on nothing but fact." Let's face it: Everything is high including cigarettes, gasoline, entertainment, cars, milk, and potatoes.

It is unfair to single out certain professions just because their commodities are essential.

TENSION AND DIET AT ZOOS

Arteriosclerosis among birds and animals at the Philadelphia Zoological Gardens has jumped 10 to 20 fold during the last 25 years. The rise began in 1935 following the institution of an enhanced control diet. The new rations increased the fat content by three to five per cent but it is not known whether this played a role. One theory is that the diet may have produced "greater energy and more fellow animals (or birds) with which to compete." Social conditions influence the rise of circulatory disease, regardless of diet. Chickens that retained their sense of freedom showed no arterial trouble even though fed relatively high amounts of fat. Perhaps the longevity of the independent GP stems from his freedom to practice medicine as he wishes.

PLASTIC FOR BONE FRACTURE

Ostamer is Merrell's polyurethane plastic foam to aid in the repair of long bone fractures that require open reduction. The material serves as a bond to stabilize fractured leg bones and in some cases weight bearing is possible within 48 hours. The cement-like foam mixture fills the fracture defect and adheres to the inside surface of the bone. It hardens in approximately 20 to 30 minutes and as such acts as an internal plastic splint.

Metal rods, disks, or plates may be used in conjunction with Ostamer.

The product has been used since 1956 and over 370 operation case reports have been collected from 31 states. Your editors are reporting from printed material and not from experience. As a result this is not an endorsement for the product.

BROCHURE

The latest Public Affairs brochure, "When a Family Faces Cancer," is aimed at the family who needs guidance when a member has cancer. It can be obtained by sending 25c to Public Affairs Committee, 22 East 38 Street, New York 16, N. Y. for Pamphlet No. 286.

SURGICAL DRAPE

A skin tight plastic sheet has been introduced for use as a surgical drape to cover the area of operation. The film seals off the operating wound from bacterial contamination from the patient's own skin. It is not porous to perspiration and other contaminating materials. The skin is cleansed as usual and a special aerosol sticky type plastic is sprayed on the operative site. The clear vinyl sheet is set in place and form fitted to the body by pressing toward the edge. The surgeon makes the incision through the plastic and there is no need for towels or other drape type of materials. The sheet is peeled off as soon as the wound is closed. Plastics Company, a division of Union Carbide Corp., makes Vi-Drape Film.

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NEWS of the STATE



ADAMS

MEETING. Dr. Leonard Furlow, professor of neurosurgery, Washington University, St. Louis, spoke on "Head Injuries," at the October meeting of the Adams County Medical Society.

CHRISTIAN

MEETING. Dr. E. Franck, pathologist, St. Vincent's Hospital, Pana, talked on "Common Hematological Problems," at the October meeting of the Christian County Medical Society.

COOK

SOUTH AMERICA. Dr. Frederick Steigmann, director of clinical investigation of the Hektoen Institute for Medical Research of Cook County Hospital, gave papers on hepatic granuloma and treatment of hepatitis and hepatic coma at the Argentinian Gastroenterology Congress in Cordoba in August. He also presented papers on chronic diarrhea before gastroenterological groups in Caracas, Rio de Janeiro, Buenos Aires, Lima, and Tegucigalpa. During this tour he was given honorary membership in the Argentinian Gastroenterological Association, the Society of Internal Medicine and the Pathological Society of Buenos Aires, and the Gastroenterological Society of Peru.

SOCIETY NEWS. Chicago Urological Society has scheduled the following afternoon meetings: December 9, Wesley Memorial Hospital; January 20, 1960, Michael Reese Hospital; March 2, Billings Hospital; and April 13, Columbus

Hospital. The November meeting was held at Cook County Hospital. Dr. Vincent J. O'Connor was chosen as the Belfield Lecturer for the coming year. The subject of his address will be "Surgical Correction of Male Sterility."

MEETINGS. The first board meeting of the Woman's Auxiliary to the Illinois State Medical Society was held October 20. Following luncheon Dr. Percy E. Hopkins spoke on "The Economic Aspects of the Medical Care of the Aged."

Dr. William P. Longmire, Jr., professor and chairman, department of surgery, University of California Medical School spoke on "Gastroesophageal Hemorrhage Associated with Cirrhosis," at the annual meeting of the Chicago Surgical Society. This was the Society's 59th annual dinner and 31st annual Arthur Dean Bevan lecture.

Dr. Albert Dorfman, professor of pediatrics, University of Chicago and director, La Rabida Sanitarium, was Phi Delta Epsilon's 11th annual lecturer. Dr. Dorfman spoke on "Medical and Biological Implications of Connective Tissue" at the Chicago Medical School's Kling Auditorium, November 2; "The Metabolism of Mucopoly-saccharides and Disturbances in Gargoylism," at Northwestern University Medical School's Thorne Hall, November 3; and "The Diagnosis and Treatment of Rheumatic Fever," at the University of Illinois College of Medicine, November 4.

Dr. Axel N. Arnesen, professor of clinical

obstetrics and gynecology, and associate professor of clinical radiology, Washington University School of Medicine, St. Louis, gave as the 10th annual Joseph L. Baer lecture for the Chicago Gynecological Society, "Follow-up Observations in 400 Consecutive Primary Cases of Cervical Cancer."

Dr. George V. LeRoy, professor, department of medicine and associate dean of the biological sciences, University of Chicago, talked "On the Asthma," and Dr. Ilza Veith, associate professor, department of the history of medicine, University of Chicago, spoke on "A Medical Historian in Japan," at the October meeting of the Society of Medical History of Chicago.

Dr. Hildegard Schorsch, gave an "X-Ray Tour of the Gastrointestinal Tract," with clinical comments by Dr. Gertrude M. Engbring at the November meeting of the American Medical Women's Association. Dr. Augusta Webster will discuss "Hemorrhage Complicating Pregnancy," on January 13 at the Society's meeting in the Beaubien Room, Prudential Plaza.

Dr. Harold Himwich, professor lecturer in physiology, University of Illinois College of Medicine, will speak on "Drugs Useful in the Treatment of Emotional Disorders—Physiology, Indications, Contraindications," on December 2, in the North Shore Hospital lecture series, 225 Sheridan Road, Winnetka.

At a joint meeting of the Institute of Medicine of Chicago and the Chicago Society of Internal Medicine, October 26, Dr. Robert J. Hasterlik, associate professor of medicine, University of Chicago and associate director, Argonne Cancer Research Hospital, gave an illustrated lecture on "Radiation Neoplasia." This was the 14th Edwin R. Kretschmer Memorial Lecture.

NEW POSTS. Dr. Harold M. Visotsky, assistant professor of psychiatry at the University of Illinois College of Medicine, has been appointed director of mental health for the City of Chicago.

Dr. Werner Tuteur, clinical director of Elgin State Hospital has been appointed to the courtesy staff of Forest Hospital, Des Plaines; and Dr. Kalman Gyarfás will serve as consultant of the hospital's psychiatric training program.

Dr. C. L. Noggle has been chosen medical staff president of Ravenswood Hospital.

Dr. Leopold Brodny has been appointed chairman of the department of urology at Louis A.

Weiss Hospital. As secretary general of the International Fertility Association, Dr. Brodny will establish the headquarters for this association at the Louis A. Weiss Hospital.

Robert W. Thompson, discoverer of the theta meson, has joined the faculty of the University of Chicago. The world's largest magnetic double-cloud chamber is being built on the campus for his research on cosmic rays of the highest energy level.

Dr. Edward R. Pinckney has been named director of the newly established division of scientific activities of the Student American Medical Association. Dr. Pinckney, medical editor of the association's publication, the *New Physician*, will undertake as his first project the study of state medical licensing problems as they affect new physicians.

HOSPITAL NEWS. Augustana Hospital marked its 75th year of service with an open house. The hospital has provided postgraduate training through internships and residencies for more than 500 physicians and offers approved courses for medical technicians. To patients who could pay little or nothing, the hospital—according to a historical summary—has rendered free care worth \$3 million. The hospital has been an important social arm of the Augustana Lutheran Church.

HONORED. Dr. Sidney Strauss, a founder of the Chicago Heart Association and the American Heart Association, 81 years of age, was honored at the dedication of the new headquarters of the Chicago Heart Association, 22 West Madison, Chicago.

Dr. Walter Schiller, retired Chicago and New York pathologist, originator of the Schiller test for the detection of cancer of the uterus, was honored by the United States Section, International College of Surgeons, at their recent 24th annual congress.

CONSTRUCTION. The Chicago Medical School has commenced construction work on its new Medical Research Institute. The 10 story, block long, 110,000 square foot building is the first of several to be erected on the school's 10 acre campus in the West Side Medical Center. The United States Public Health Service awarded the school \$1 million for the building and \$121,696 for movable equipment within the building. The new Institute will provide carefully planned research

facilities for over 400 scientists, physicians, technicians, and postgraduate students; and is scheduled for completion in the fall of 1960.

SCIENTIFIC EXHIBITS. The following scientific exhibits were presented at the annual meeting of the American Roentgen Ray Society in Cincinnati: "Myelofibrosis," by Dr. William T. Meszaros; and "Roentgen and Hematological Manifestations of the Congenital Hemolytic Anemias," by Dr. Joseph J. Litschgi.

DEKALB

MEETING. Annette Lefkowitz, R.N., Ed. D., nursing education consultant, Northern Illinois University, DeKalb spoke on "Nurses Training Program of Northern Illinois University," at the September meeting of the DeKalb County Medical Society. The Women's Auxiliary met with the physicians.

EDGAR

MEETING. Dr. Harlan English, Danville, spoke on "Office Urology," to the Edgar County Medical Society at the October meeting.

FULTON

MEETING. Drs. Carl Neuhoﬀ and Paul Blough spoke on "Hypnosis in Obstetrics," at the October meeting of the Fulton County Medical Society.

LAKE

MEETING. Dr. Arthur Baker, director, Lake County Health Department, and members of his staff discussed the present activities of the county health department and plans for their future at the October meeting of the Lake County Medical Society.

MACON

MEETING. Dr. Theodore Cornbleet, clinical professor of dermatology, University of Illinois College of Medicine, spoke on "Dermatological Manifestations of Systemic Disease," at the October meeting of Macon County Medical Society.

MADISON

MEETING. The October meeting of the Madison County Medical Society was held at the home

of Dr. and Mrs. James B. McCloskey on the Alton-Jerseyville Road, Godfrey. The Women's Auxiliary served dinner preceding the meeting.

McLEAN

MEETING. Professor Granger Westberg, professor in the religion and personality department, Federated Theological Faculty, University of Chicago spoke on "Relationship of Religion to Medicine," in October to members of the McLean County Medical Society who were guests of the Ministerial Association.

PEORIA

MEETING. Dr. Robert Jensik, assistant professor of surgery, University of Illinois College of Medicine, spoke on "The Results of Pulmonary Resection for Metastatic Neoplasms," at the October meeting of the Peoria Medical Society.

SANGAMON

MEETING. Mr. Roger W. Peterson, consultant, Professional Management for Physicians and Dentists, Bloomington, talked on "Net After Taxes," at the October meeting of the Sangamon County Medical Society.

STEPHENSON

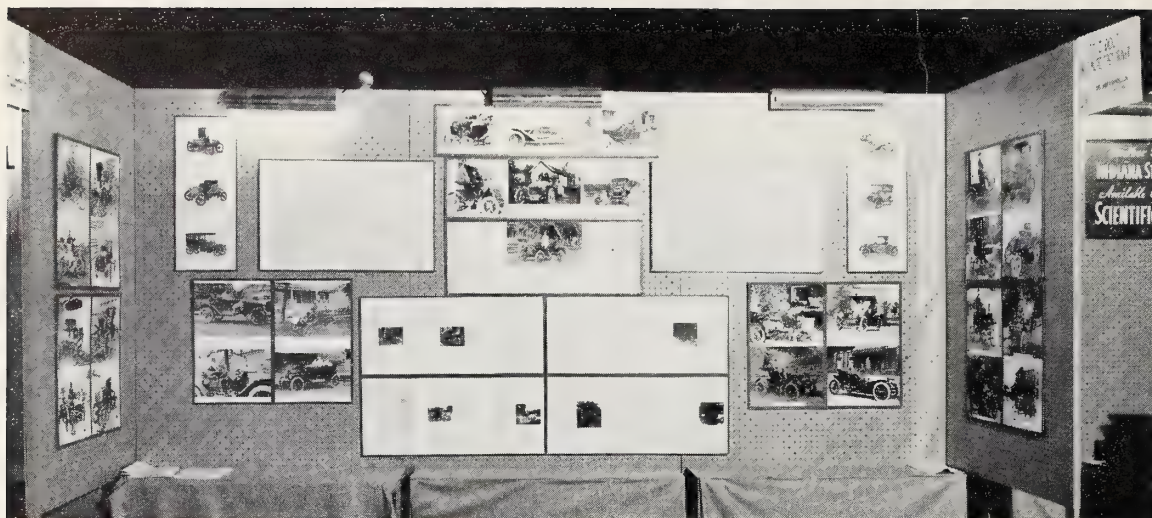
MEETING. Dr. John H. Schneewind, clinical assistant professor of surgery, University of Illinois College of Medicine, spoke on "The Management of the Acute Hand Injuries," at the October meeting of the Stephenson County Medical Society.

VERMILION

MEETING. Dr. Henry H. Fineberg, associate professor of neurology and psychiatry, Northwestern University Medical School spoke on "Management of the Behavior Problems in the Community," at the October meeting of the Vermilion County Medical Society.

WILL-GRUNDY

MEETING. Mr. John Carmichael, sports editor, Chicago Daily News, spoke at the October meeting of Doctors, Druggists, and Dentists in the Will and Grundy County Medical Societies meeting.



"OLD DOC" — FIRST AUTO TEST DRIVER by Mr. John Mirt
shown recently at the Indiana State Medical meeting.

GENERAL

ELECTIONS. Dr. Edward L. Compere, professor and chairman of the department of orthopedic surgery, Northwestern University Medical School, has been re-elected president of the United States section, International College of Surgeons. Dr. Francis L. Lederer, professor and head of the department of otolaryngology, University of Illinois College of Medicine, is one of the vice presidents. Dr. Karl A. Meyer, who has been secretary of the United States section, has been named honorary secretary. Dr. John B. O'Donoghue is now secretary and Dr. Oscar B. Nugent was re-elected treasurer. Dr. Louis F. Plzak, Berwyn, is secretary of the Qualifications and Examination Council.

Dorothea C. Augustin, Chicago, is executive secretary for the American Congress of Physical Medicine and Rehabilitation and American Academy of Physical Medicine and Rehabilitation.

MEETING. The postgraduate education committee of the Illinois Society of Anesthesiologists held an October meeting at the Wagon Wheel Lodge, Rockton. Dr. Arthur T. Shima, Oak Park spoke on "Cardiac Arrest;" Dr. William A. Dewitt, Joliet—"Obstetrical Anesthesia;" and Dr. Herbert M. Epstein, Evanston—"Treatment of the Comatose Patient."

F.A.C.S. At the October annual clinical congress of the American College of Surgeons the

following Illinois surgeons were awarded fellowships:

Aurora, William C. Lithgow; Berwyn, Lawrence J. Sykora; Chicago, Lawrence I. Bernard, Robert Bouer, John A. Caserta, Donald E. Casey, Robert D. Crane, Raymond Firfer, William B. Fischer, Sheldon S. Gorsky, Charlotte Herman Kerr, Robert E. Lane, Raymond A. McDermott, Jr., Edward A. Millar, Leonard P. Rapoport, Paul R. Rosenbluth, Eli T. Samet, Arne E. Schairer, Thomas W. Shields, Jerrold Widran; Chicago Heights, Sidney W. Duke; Decatur, Thomas W. Samuels, Jr.; Deerfield, Vernon Z. Hutchings; Dixon, James G. McPettridge; Elgin, Charles M. Jeohnson, Jr., Richard C. Powers, Gordon Q. Vancil; Evanston, William H. Harridge; Galesburg, Robert G. Canham; Harvey, Albert L. Sheetz; Highland Park, Jerome E. Abrahams; Hinsdale, William B. Frymark; Homewood, John E. Driscoll; Joliet, John W. Bowden, Archibald D. McCoy; La Grange, J. Norman Young; Moline, Paul W. Moen; Oak Park, John P. Igini; Park Forest, Jerome Warren; Park Ridge, Thaddeus A. Wozniak; Peoria, Edward J. Schlicksup; Quincy, Robert W. Taylor; Rantoul, Herbert V. Swindell, Lt. Col.; River Forest, Edward J. Del Beccaro; Rockford, F. Nelson Suma; Rock Island, Raymond W. Dasso; Springfield, Lee F. Winkler; Urbana, Jack C. Cooley, James S. Walker; Waukegan, Ray C. Johnston; Winnetka, John L. Savage.

*"Your Health Comes First" over Radio Chicago
WJJD:*

November 25 at 6:00 p.m.—*Paul K. Anthony*, clinical associate in pediatrics, Stritch School of Medicine of Loyola University, will discuss "Eating Problems in Children."

This is a public service program sponsored by the Illinois State Medical Society in co-operation with Radio Chicago WJJD.

Lectures Arranged by the Illinois State Medical Society:

Charles F. Johnson, assistant professor of medicine, University of Chicago School of Medicine, addressed the Knox County Medical Society in Galesburg, October 15, on "Clinical Problems of Malabsorption."

George Milles, professor of pathology, University of Illinois College of Medicine, addressed a joint meeting of the Whiteside and Lee County Medical Societies in Sterling, October 15, on "The Effective Practice of Surgical Pathology."

Sol Altschul, assistant professor of psychiatry, University of Illinois College of Medicine, addressed the Woman's Auxiliary to the North Shore Branch of the Chicago Medical Society, October 22, on "Dynamic Psychiatry."

Oglesby Paul, clinical associate professor of medicine, University of Illinois College of Medicine, addressed the Fifth United States Army personnel officers, October 22, on "Health of the Executive."

William B. Fischer, associate in orthopedic surgery, Northwestern University Medical School, addressed the Bureau County Medical Society in Spring Valley, November 10, on "Fractures of the Extremities."

E. Trier Morch, Director, Department of Anesthesia, Cook County Hospital, addressed the Champaign County Medical Society in Champaign, November 12, on "Anesthesia Covering Preoperative Medication, Cardiovascular Arrest, and Postoperative Medication."

Benjamin Blackman, instructor in neurology and psychiatry, Northwestern University Medical Society will present the first lecture in a series on psychiatric problems before the Logan County Medical Society in Lincoln, November 19.

Robert A. DeBord, Peoria, affiliated with the staffs of St. Francis and Methodist Hospitals, and the Municipal Tuberculosis Sanitarium of

Peoria, Bureau County Medical Society in Princeton, December 8, on "Surgical Treatment of Congenital Anomalies of the Gastrointestinal Tract."

Harry B. Harding, associate professor of microbiology, Northwestern University Medical School, Stock Yards Branch of the Chicago Medical Society, December 18, on "Present Value of the New and Old Antibiotics in the Treatment of Upper Respiratory Infections."

DEATHS

DELBERT M. BERGENSTAL, Washington, D. C., recently of Chicago, who graduated at the University of Chicago School of Medicine in 1947, died September 12, aged 42. He was assistant chief of the National Cancer Institute.

*GEORGE LOUIS COHEN**, Washington, who graduated at St. Louis University School of Medicine in 1928, died July 8, aged 56. He was a member of the staffs of the Methodist and St. Francis Hospitals, and the Proctor Community Hospital in Peoria.

*JOHN B. COLWELL**, Champaign, who graduated at Rush Medical College in 1902, died September 17, aged 86. He was first assistant warden at Cook County Hospital from 1902-1910.

*EDWARD F. FISCHER**, Alton, who graduated at Barnes Medical College, St. Louis, in 1910, died September 22, aged 77. He was a member of the staffs of the Alton Memorial and St. Joseph's Hospitals.

*ANTHONY C. FORMUSA**, Chicago, who graduated at the University of Illinois College of Medicine in 1915, died September 29, aged 66. For a time he owned and operated the People's Hospital on West Cermak Road.

FRANK J. GRIFFIN, retired, River Forest, who graduated at the University of Illinois College of Medicine in 1908, died September 14, aged 81.

*JOSEPH KANTER**, retired, Chicago, who graduated at the University of Illinois College of Medicine in 1929, died September 18, aged 62. He was a member of the American Academy of Dermatology and Syphilology.

*HERBERT E. LANDES**, Chicago, who graduated at Rush Medical College in 1922, died September 24, aged 64. He was professor and chairman of the department of urology at Stritch

*Indicates members of the Illinois State Medical Society.

School of Medicine of Loyola University since 1932. He had served as chief of the department of urology at Mercy Hospital since 1932 and was consulting urologist for the Municipal Tuberculosis Sanitarium.

JOHN A. MART*, Chicago, who graduated at Northwestern University Medical School in 1938, died September 12, aged 50. He was an associate in medicine at Northwestern University Medical School and had been a member of the staff of Passavant Hospital since 1941. He had served for four years as assistant superintendent at St. Joseph County Hospital in South Bend, Ind., and was a former medical counselor for the Chicago *Tribune*.

ATTILIO MONACO*, Elmhurst, who graduated at Bennett Medical College, Chicago, in 1914, died September 20, aged 82.

FRANK S. NEEDHAM*, Oak Park, who graduated at Dearborn Medical College, Chicago, in 1905, died September 22, aged 82. He was a member of the staffs of Oak Park and West Suburban Hospitals, and was Oak Park Health Commissioner from 1918 to 1938. He was instrumental in starting the inspection and supervision of milk there.

EDWIN FREDERICK SCHRADER*, Macomb, who graduated at the College of Physicians and Surgeons of Chicago, School of Medicine of the Uni-

versity of Illinois in 1907, died in Peoria, July 2, aged 80.

JAMES HARRY VETTER*, Rockford, who graduated at Rush Medical College in 1916, died September 3, aged 69. He limited his medical practice to the field of anesthesiology.

GREGORY ROY WATERS*, Chicago, who graduated at Loyola University School of Medicine in 1932, died June 25, aged 58. He was a member of the Industrial Medical Association; served as medical director for Swift & Company; and was formerly associated with the Indian Service.

ANDERS J. WEIGEN*, Chicago, who graduated at Rush Medical College in 1914, died September 27, aged 70. He was a member of the staff of Swedish Covenant Hospital since 1918. He also had been a member of the staffs of Children's Memorial Hospital and of Augustana Hospital. He was a member of the Chicago Pediatric Society.

GEORGE CARLYLE WOOD*, Effingham, who graduated at Loyola University School of Medicine in 1928, died, June 25, aged 60. He served as county coroner, was associated with St. Anthony Memorial Hospital, and was at one time associated with Indian Service.

*Indicates members of the Illinois State Medical Society.

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Tumors of the Thyroid Gland

WILLIAM M. McMILLAN, CHICAGO

Thyroid tumors are intriguing because there are so many divergent opinions regarding diagnosis as well as treatment. Lack of agreement on classification, at the level of microscopic diagnosis, confuses the picture further. It is my purpose to review the various facets of this problem and state my own opinions, with the full understanding that many will not agree with me.

The normal thyroid gland is a bilaterally symmetrical organ of internal secretion formed by two lobes, lying on each side of the trachea, usually below the larynx. They are united by a thin layer of tissue, the isthmus. A third lobe, designated by some as a pyramidal lobe, occasionally is present. It arises from the upper border of the isthmus, extending at times to the level of the hyoid bone. This results from the fact that the median thyroid component arises as an unpaired outgrowth of the ventral pharyngeal wall and passes down the neck along the thyroglossal tract. Therefore, tumors of the thyroid may be distributed anywhere from the foramen cecum to the anterior mediastinum and may be even intratracheal. It should also be stated

that the old concept of lateral aberrant thyroid is completely erroneous; such foci are known to represent metastases from primary thyroid carcinomas.

When confronted with a tumor of the thyroid or a condition resembling such a tumor, we must rule out the following: Cysts of the thyroglossal duct which, because of their anterior midline location and frequency of sinus formation, usually offer no problem. Colloid adenomatous goiter may be confused with adenomas as well as with thyroiditis. Surgical intervention is indicated for cosmetic reasons, substernal extension, pressure, or altered thyroid function and solves the problem easily. However, if Reidel's struma is diagnosed at operation, a wedge resection of the isthmus and inner aspect of both lobes is indicated to decompress the trachea.

If it is certain that a thyroid tumor is benign it should be operated upon only for the above reasons, but here we collide with the problem of definition. The usual statement made in connection with these tumors is that both follicular adenomas and papillary adenomas are potentially cancerous and they should be removed surgically with an adequate margin of adjacent normal thyroid tissue. The question arises, are many such tumors slow growing cancers? If so, what

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Presented before the 119th Annual Meeting, Illinois State Medical Society, Chicago, May 20, 1959.

constitutes adequate surgical excision? Certainly we all agree that a frozen section is of little value in most cases, in making a decision as to what course to pursue. Cole, for example, in 1949 reported an incidence of malignancy in solitary thyroid nodules of 24 per cent and in multinodular goiter of 7.2 per cent.¹ In the same year Crile and Dempsey reported an incidence rate of cancer in nontoxic nodular goiters of 10.9 per cent and 24 per cent in nontoxic solitary tumors removed surgically.²

On the other hand, the Mayo Clinic reported recently that 50 per cent of all clinically normal thyroid glands examined at autopsy contained nodules and only 0.8 per cent of them were malignant; one out of eight contained solitary nodules and three out of eight contained multiple nodules. These figures were collected from about 1,000 autopsies and represent the average figure of other sources.³

The variance of these figures brings up two questions. First, what microscopic criteria must be used to establish the presence of a malignancy of the thyroid? Second, what treatment should be carried out? Obviously, when distant metastases are present these questions are answered easily. Extension through the capsule and vascular invasion are accepted as indicative of malignant tumor.

The literature contains several references tending to minimize the danger of cancer in nodules of the thyroid. It has been said that histologic cancer may be present in this location and be so slow growing as in no way interfere with the life span of certain individuals.

I recently heard Dr. Edwin Astwood of New England Medical Center, Boston, rather oversimplify this whole problem by saying there were three types of tumors: so-called papillary carcinomas, metastasizing adenoma, and anaplastic carcinomas.⁴ He does not consider papillary carcinomas malignant; therefore, operation for cancer is not indicated. The metastasizing adenomas cannot be recognized and the anaplastic carcinomas are not saved by operation; therefore, he thinks operation is not indicated as a treatment for preventing death from cancer of the thyroid. Furthermore, he stated that 90 per cent of tumors are involutionary and tend to stay localized if not disturbed; and less than 5 per cent are actually malignant. So-called stress reaction and the possibility of spread due to

surgery could be considered as support for avoiding surgical methods of treatment.

Dr. Astwood thinks that surgery for cancer of the thyroid should be abandoned and treatment with thyroid extract substituted. This presents an intriguing approach to the problem but one to which I cannot subscribe. I agree that distant metastases contraindicate surgery for thyroid tumors unless pressure symptoms must be relieved. I also feel that radical neck dissection is not standardized as to its indications or its technique. The same can be said of radical breast surgery. We frequently see inadequate procedures done that are called radical neck dissections.

This confirms my belief that anyone can become quite free wheeling in discussing this subject. My opinions are my own when I say that we must decide our approach to this problem by the following considerations: If there is a solitary nodule, is it firm or hard, is it fixed, and is it increasing in size? The last three findings are suspicious of malignancy although thyroiditis may be the correct diagnosis. In either event, operation is indicated.

If operation is indicated the first procedures usually decide whether or not the patient is to be cured with surgery. Aspiration biopsy usually is of no value. The use of a tenaculum or other sharp instrument near the tumor is unwise as this may cause dissemination of the cancer cells. A generous portion of the surrounding normal thyroid should be removed with the tumor. This usually means a hemithyroidectomy and total removal of the isthmus on the affected side. In addition, the opposite lobe must be inspected carefully and appropriate surgery done as indicated.

Frozen section is reliable only in highly malignant tumors and is of little or no value in well differentiated cancers or doubtful cases. Here is a slide showing a benign papillary adenoma. The second slide shows a papillary carcinoma of the thyroid secondary in a lymph gland. This tumor looks similar to the benign papillary adenoma. The third slide is that of a carcinoma of the thyroid secondary in a lymph gland and this looks like a normal thyroid gland. In the latter situations, frozen sections will not help the surgeon in deciding his surgical management of the patient. If normal thyroid tissue does not entirely surround the excised specimen, additional tissue should be removed. This does not occur often

but the question of blood vessel invasion and penetration of the capsule plagues the surgeon and in the latter situation, one must decide whether or not to do a radical neck dissection.

It is not my purpose here to go into the various types of thyroid malignancy as this has been the subject of many discussions and numerous varying classifications. Suffice it to say that if malignancy has been determined and distant metastases are absent, a radical infrahyoid neck dissection should be done. It consists of at least removal of the lymph glands from the mastoid process down to the clavicle in both anterior and posterior triangles. Procedures beyond this point such as removing the submaxillary salivary gland and sacrificing the sternocleidomastoid muscle seem to me to be of doubtful value. Indeed I do not know of any figures to support the firm belief that radical neck dissection as described really does increase the salvage rate.

The use of radioactive iodine also should be mentioned. Some advocate the use of tracer studies first to determine whether or not the lesion is "hot" or "cold." I personally do not feel that this is of any particular value. Radioactive iodine also is recommended by some in treating malignant disease of the thyroid. This I do not prefer unless the case obviously is beyond hope of surgical intervention. I say this because I would like to again remind you of the uncertainty of diagnosis even under the microscope of the true nature of many of these tumors. In addition, animal experiments and clinical observations have demonstrated that carcinoma of the thyroid with metastases has been produced by administration of I^{131} .⁵ A review of the evidence regarding an association between exposure of ionizing radiation and the subsequent development of carcinoma is well expressed by Wilson and others.⁶ They state that exposure in childhood predisposes to the appearance of thyroid neoplasms and, while the association following irradiation in adult life is not so conclusive, it is certainly possible. A further point of interest regarding the effects of prolonged stimulation of the thyroid is the fact that many observers have noted not only in rats but also in humans the development of adenomas as well as discrete nodules after prolonged treatment with thiouracil. While malignant changes

have not been proved in these cases, certainly the development of such nodules in the circumstances leads me to the conclusion that prolonged use of propylthiouracil should not be employed unless no other management of the presenting condition is possible.

SUMMARY

I do not agree with Dr. Astwood in his belief that surgery for tumors of the thyroid gland be limited to mechanical problems and that medical management be substituted. On the other hand, I am not sure of the benefits to be derived from extremely radical procedures. Until sufficient evidence is produced to change my view, I am opposed to the primary use of radioactive iodine for treating these conditions.

In addition, since multinodular goiter is present much more frequently than it is found on clinical examination, it would be ridiculous to operate on such cases for the prevention of cancer.

I feel that all solitary nodules should be widely excised. If local glands are present and distant metastases are not apparent, an attempt then can be made to remove them by a conservative radical neck dissection, if I may use this term. The history of recent or rapid enlargement of previous existing solitary nodule or nodular goiter makes the indication more urgent. I have no quarrel with those who feel that something further should be done, either in the form of more radical surgery or radioactive therapy, but am not at all sure that this does not fall entirely into the category of hope and not scientific facts.

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Dietary Fads in Heart Disease

PHILIP L. WHITE, Sc.D., CHICAGO

Recommendations for dietary adjustments to control blood lipid levels have led to many vogues and fads. Some show great promise; others do not. Those that do not often are promoted with the flash and vigor of the old side show medicine man. For example, the following announcement was noted recently: "New 'Coronaid' with Choless brings immediate benefits never before possible. Only this new combination reduces strangulating cholesterol fats, yet is so safe."—"Coronaid" and "Choless"—"favorable unsaturated fatty acid fractions, oil-free lecithin, choline, inositol, methionine, vitamins A, B₁₂, D, C, pyridoxine, and rutin."

Just mail a coupon to be saved from a choked heart.

This is but one example of the many outlandish products. Another, that is promoted in Philadelphia, is "First Nauman," which apparently is an ointment that contains specially prepared white oils depolarized. It is promoted for the relief of heart pains, high blood pressure, arthritis, and certain heart conditions.

Such products may be in a class by themselves, but are they? The following is a quotation from a news release of La Crescenta Nutrition Service, La Crescenta, California: "Vitamin E lessens the danger of heart disease and even prevents disease of the common types, such as coronary, hypertensive, or rheumatic because it prevents blood clotting, it helps conserve oxygen, it prevents excessive scar tissue, and it dilates blood vessels."

There is reason to be concerned. People believe these claims and pin their hopes on mail order diagnosticians. The public is concerned about its health. Communication media have be-

come involved in side-taking on critical medical issues. Some food industries and drug companies design products and promotion on unsupportable health claims.

For the most part, these products contain ingredients that are involved in some way with lipid metabolism. The ingredients may be metabolic essentials (if not dietary essentials) so that the claims appear to be rational. Vitamin E, lecithin and other phospholipids, pyridoxine, choline, methionine, and magnesium are the most common.

Estrogens, thyroid extracts, sitosterols, and massive doses of nicotinic acid do influence lipid metabolism yet frequently are exploited in an unfortunate manner. For example, large doses of nicotinic acid have been shown to reduce hypercholesterolemia,¹ but many products contain insufficient amounts to be effective.

Capsules and emulsions containing oils rich in linoleic acid represent a third group. The use of capsules of oil or oil emulsions as sources of linoleic acid requires consideration of the whole diet. The mere addition of such oils to the diet has not been found effective.² The capsules usually contain from 150 to 750 milligrams of safflower oil (72 per cent linoleic acid) and varying quantities of pyridoxine, niacin, and vitamin E. There seems to be little likelihood that the small quantities contained in such preparations, in their recommended dose, have much cholesterol lowering effect.

Other products and diets have shown promise in the quest for a regimen that will keep blood lipids within statistically normal limits. These are based upon the concept that the proportions of certain fatty acids are of perhaps equal significance to the total amount of dietary fat in the control of serum cholesterol levels. Thus, the current vogue is the replacement of the more highly saturated fatty acid sources with similar good items containing greater amounts of the

Secretary, Council on Foods and Nutrition, American Medical Association.

While the Nutrition Committee of the Chicago Heart Association is sponsoring this article, the opinions expressed are those of the authors and do not necessarily represent the official view of that committee.

polyunsaturated fatty acids, particularly linoleic acid. Such regimens are undergoing rigorous testing at present. Their final evaluation must be judged on the basis of morbidity and mortality.³ Meanwhile, many physicians are trying diets designed to increase the ratio of linoleic acid to saturated fatty acids, on an experimental basis. In any case, the quantities involved per day are on the order of grams, not milligrams.

Several words of caution would seem to be in order. The word "hydrogenated" in some circles has become synonymous with ominous. Certain authorities have advised the elimination of all hydrogenated fats from the diet.⁴ At present, the regulations for label declarations on food products do not require statements of composition for products with standards of identity and do not require statements of amounts of ingredients for other products. Thus a casual understanding of food composition may no longer be sufficient. Since so many food products contain hydrogenated or partially hydrogenated oils, the blanket condemnation of hydrogenation could cause great confusion. Peanut butter serves as a good illustration. The label of a peanut butter jar may state, . . . "contains hydrogenated peanut oil." Some would have you avoid this food on the basis of this label statement. But there is nothing that tells the consumer that peanut butter contains on the order of 2 per cent added hydrogenated peanut oil while the remainder of the oil from the peanuts is unchanged. Peanut butter contains about 48 per cent peanut oil of which 25 per cent is linoleic acid with or without added hydrogenated oils to prevent separation.

Because of the claims being made for products containing significant amounts of linoleic acid, a brief examination of these products is of interest. Cooking oils and salad oils made from vegetable sources have been available for years. The principle sources of these oils are corn, cottonseed, and soybean. Soybean oil, more frequently used in salad oils than in pure form, tends to undergo undesirable flavor changes. This off flavor can be masked with spices or inhibited by light hydrogenation. The pure oil contains about 50 per cent linoleic acid. Corn oil and cottonseed oil, on the other hand, are more stable. They are similar in linoleic acid content, but not in the other fatty acids. The linoleic acid content may

average 54 per cent and 50 per cent for corn oil and cottonseed oil while the iodine values could be 127 and 109, respectively. The former oil contains 10 per cent saturated fatty acids and the latter 25 per cent.

The Pitman-Moore Company introduced a margarine about a year ago that contains on the order of 35 per cent linoleic acid. There are now three plasticized margarines containing approximately 65 per cent unhydrogenated oils (Swifts' VSF, Pitman-Moore's Emdee, and Best Foods' Cornette). Obviously such margarines must be especially processed to give the product a sufficiently high melting point to permit shape retention. These margarines are blended or plasticized with a suitable, more solid fat. They generally contain about 15 per cent hydrogenated and 65 per cent unhydrogenated oils. The hardened fat portion may be hydrogenated coconut oil, cottonseed oil, corn oil, soybean oil, or blends. The net result is a spread containing a high proportion of linoleic acid. Another margarine, made entirely from hydrogenated corn oil, is promoted as offering the same benefits. However, this margarine contains no more linoleic acid than conventional margarines and the claims made for it have not been documented.

Every day new products, regimens, and ideas will be introduced for the control of serum cholesterol levels. Each should be studied carefully before the claims made for them are accepted. It is important to understand the benefits and limitations to be expected from procedures currently used. The composition of the product, the conditions under which it was tested, and the identity and qualifications of the investigator should be known.

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Ballistocardiography: Its Meaning and Role in Clinical Medicine

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The term ballistocardiography (BCG) is derived from the word ballistics, which is the science of motions of projectiles. Ballistocardiography is the technique of measuring the recoil of the body to the displacement produced by the propulsion of the blood from the heart during systole. This instrumental measurement of the recoil mechanism of the heart beat is an ingenious, yet simple and inexpensive device and gives information about cardiodynamics not easily determined by other methods. Newton's third law — "to every action there is an equal and opposite reaction" — is the principle underlying the ballistic motion of the body resulting from cardiac action.

Ballistocardiography has come a long way since J. W. Gordon, 1877,¹ recorded movements of a man placed in an horizontal position on a platform suspended from the ceiling by ropes. Isaac Starr actually began the pioneer studies.² His patients were placed upon a rigid table suspended so as to be free to move under the influence of the ballistic phenomena within the subject. An optical system recorded these movements on a timed photographic strip, resulting in the tracing. John L. Nickerson employed steel springs that damped the movement of the table, thereby eliminating much of the overshooting of a freely movable system.³ The curves presumably were truer representations of the pendulum effect of the table *per se*. The bulk and the expense of the apparatus such as this, however, hampered its widespread acceptance and use.

This problem was settled by William Dock, whose application of a two coil electromagnetic

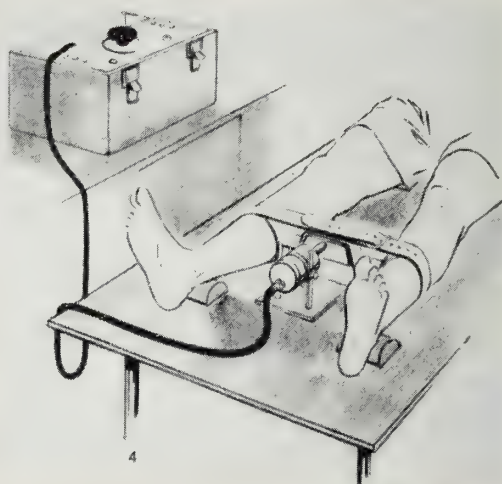


Figure 1.—Position of patient for ballistocardiographic recording.

(Courtesy of Abbott Laboratories)

direct body pickup placed across the shins, has proved dependable, light, less bulky, and less expensive.⁴ Dock's instrument in general — and there are several types (Figure 1) — is used along with a rigid surface such as a strong examining table, X-ray table, or the floor. The patient lies on his back with his heels raised by a small block of wood. Across the shins is placed a rectangular crosspiece of plastic or wood containing indentations in which two wire coils are mounted facing each other. A small magnet support is placed between the coils. The coils are then connected by wire to an electrocardiograph, and a ballistocardiographic tracing is recorded.

In essence, the ballistocardiogram (Figure 2) is a record of the effect of movement of the heart and blood column on the inertia of the human body. The tracing consists of headward (positive) and footward (negative) waves that have

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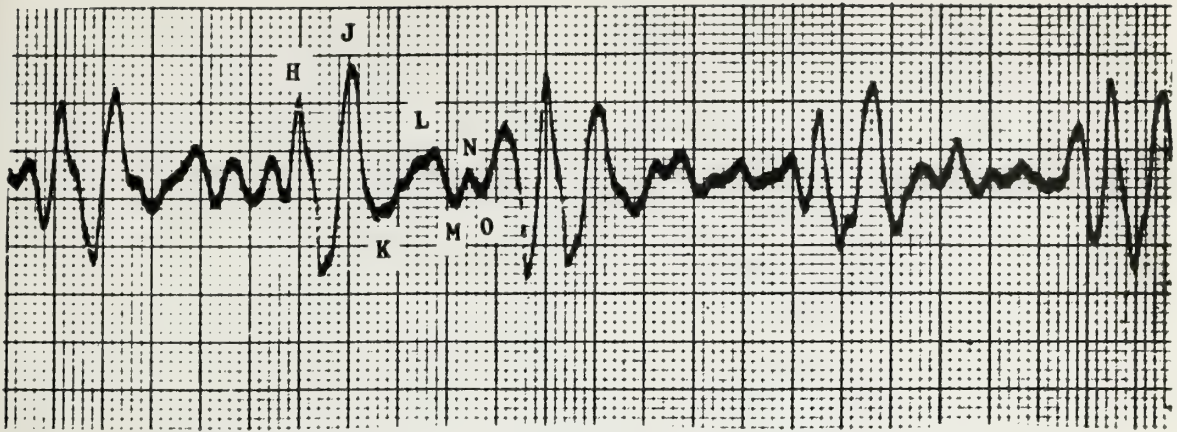


Figure 2. Normal ballistocardiographic tracing (showing identifying waves).

the letters H, I, J, K, L, M, N, O, etc. The H wave has been ascribed variously to auricular contraction, apex thrust of the heart, and abrupt deceleration in the flow of blood returning to the heart. The I wave represents the footward recoil of the body from acceleration of the blood upward into the pulmonary artery and ascending aorta. The recoil is exactly as occurs during the firing of a gun. The J wave is quite prominent and is produced by the impact of the blood mass at the crown of the two arches and acceleration of the blood in the descending aorta.

When the descending fluid wave meets the resistance of the bifurcation of the aorta and the smaller vessels of the legs, the K wave is inscribed. Hypertension and arteriosclerosis, which increase peripheral resistance, are believed to increase the amplitude of the K wave, while coarctation of the aorta shortens it. Coronary artery disease produces the so-called choatic pattern (Figure 3), in which the various waves are indistinct and indiscernible. There is little authoritative information as to the genesis or significance of L, M, N, and other diastolic waves.

It is felt perhaps that they are attributed to the return flow with filling of the heart. It has been noted working with anesthetized dogs, that the diastolic waves are a complex of diastolic forces associated with venous flow.⁵ The diastolic waves are decreased by exsanguination, vasodilator drugs, outflow obstruction, and air injection; and increased in hydropericardium, congestive heart failure, and acute vasoconstriction.

What may appear to be the importance in the clinical application of ballistocardiography is derived from the abnormal patterns often seen in angina pectoris and infarction of the myocardium. Often in these conditions, characteristic histories and laboratory findings, including the electrocardiogram, may promote misleading diagnoses. However, typical choatic ballistocardiographic patterns appear diagnostic. Several investigators have found abnormal tracings in 200 of 224 patients with angina pectoris, and in 80 per cent of patients with myocardial infarction.⁶

Koeplin studied the ballistocardiogram on 50 patients whose complaints resembled angina pectoris.⁷ The electromagnetic BCG was normal

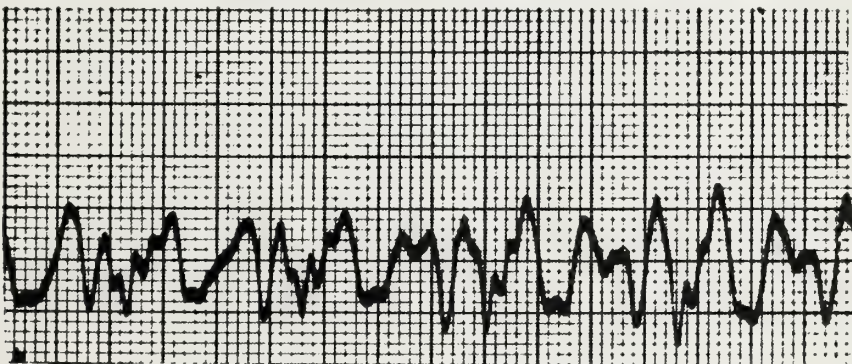


Figure 3. Abnormal ballistocardiogram (choatic pattern). From a case of acute myocardial infarction.

in 16 and abnormal in 13 persons who had normal electrocardiograms at rest and after exercise. The BCG was normal in three and abnormal in two persons with normal EKG's at rest, but abnormal to exercise. It was normal in two and abnormal in 14 persons with abnormal electrocardiograms. A contradiction between the graphic methods was accordingly present in 40 per cent, and in these cases the clinical findings nearly always supported the electrocardiogram rather than the ballistocardiogram.

Although the waves are clearly associated with specific events in the cardiac cycle, their qualitative significance have not been precisely defined. In patients with angina pectoris, the BCG generally is abnormal. However, similar abnormalities are met so often in other subjects of the same age without angina pectoris, that the practical diagnostic value of this technique at its present stage of development is minimal for this purpose.⁸ The BCG appears to be a sensitive aid in evaluating effectiveness of treatment.⁹ Abnormal tracings in angina pectoris may revert to normal after coronary vasodilator drug administration — e.g., nitroglycerine.

The degree of recovery from infarction of the myocardium and following digitalization in cardiac decompensation may be determined. Anti-thyroid therapy in patients with hyperthyroidism and closure of arteriovenous communications may produce abnormalities in the ballistocardiogram. Studies have shown that a normal tracing may occur if the cardiac muscle is sound after an infarct or with angina, or when there are low diastolic pressures or large stroke volume in myocardial failure.¹⁰ Contrariwise, patients with angina or silent healed infarcts, often have marked changes in the BCG as the only objective evidence of heart disease. Ballistocardiograms may help in anatomic diagnosis, although Starr claims the sphygmomanometer and stethoscope appear more reliable.⁹ Interpretation of blood pressure will be aided, since the reading is as dependent on cardiac output as it is on peripheral vascular constriction. Cardiac output, as determined by ballistocardiography, is in close accord with that determined by newer, more accurate methods.

Recently attention has been turned to the effect of cigarette smoking on ballistocardiographic tracings.^{11,12,13} Boyle et al. used the BCG to determine the effects of nicotine on the heart

in normal persons and in patients with cardiovascular disease.¹⁴ The variations in responses were similar. Severe reaction depended on the susceptibility of the individual rather than on the presence of disease. Mandelbaum and Mandelbaum used a high frequency recording BCG during normal breathing on 100 patients with heart disease.¹⁵ Only three tracings from the subjects younger than 50 years of age were abnormal after smoking, while approximately 43 per cent of those from the older persons showed some abnormalities. Among patients with coronary heart disease and hypertension, the incidence of marked changes in the BCG on smoking was greater. The Mandelbaums again reported that 28 per cent of the 50 normal subjects younger than 40 responded abnormally to smoking, as seen in the ballistocardiogram.¹⁶ In persons with heart disease, the incidence of abnormalities after smoking was more than twice this number. They regarded as significant the fact that of 35 patients with heart disease whom they induced to stop smoking, 30 obtained symptomatic relief.

Caccese and Schrage found the BCG much more sensitive than the EKG to the effect of nicotine on the heart.¹⁷ Smoking produced mild changes in the ballistocardiogram of 18 of 31 patients (23 normal) and marked changes in seven (four normal). Studies done in England revealed that after smoking, all 50 healthy young persons studied had normal tracings in spite of an increase in pulse rate; whereas 10.3 per cent of 30 presumably healthy older persons had temporary abnormal tracings.¹⁸ With these findings and other studies, it was concluded that unusual cardiac sensitivity to nicotine can readily be detected with the ballistocardiogram, especially in cardiac patients; and that pre-existing coronary artery disease enhances the deleterious effects of smoking on cardiac contractions.

Kelly et al. failed to note abnormalities in the ballistocardiographic tracings of 100 healthy high school youths made during rest, and no significant changes after smoking.¹⁹ They felt that the abnormal tracings seen at times after smoking most probably indicated poor habituation to tobacco. On the other hand, another study showed changes in 42 (10 per cent) of 400 BCGs made after smoking on 250 men and 150 women, all less than 40 years old.²⁰ Another study reported the effect of smoking on the BCG of 2,736 males.²¹ The greater percentage had normal trac-

ings after smoking. Overweight seemed to play a part in altering the tracings. Of the 120 in the obese group, 45 per cent had changes after smoking, whereas in the nonobese group, 36 per cent had abnormal tracings. Stern studied the BCG in overweight young adults under strict criteria for cardiovascular normalities by means of the direct body ballistocardiograph.²² The correlation between their weight and ballistocardiographic pattern was evaluated. It was found that overweight young adults had abnormal tracings and the abnormality increased with the amount of obesity.

Several investigators studied the ballistocardiogram on 36 subjects less than 50 years of age with uncomplicated peripheral arteriosclerosis or uncomplicated thromboangiitis obliterans; 28 had abnormal tracings.²³ Peripheral vascular disease *per se* may produce an abnormal tracing at rest in the absence of heart disease. When heart disease was evident, together with peripheral vascular disease in 29 patients at rest, all the ballistocardiograms were abnormal.

While this instrument is not considered by some as being ready for use in diagnosis, it has given an interesting method for investigation.^{24,25} Abnormalities may be noted in tracings of patients with peripheral vascular disease without evidence of heart disease. Because the BCG may be influenced by the vascular tree, it is more sensitive than the EKG to the effects of smoking. It has provided proof that smoking may not exert its effect on the myocardium or the coronary arteries, but mainly on the peripheral blood vessels. In some cases, the constriction of peripheral vessels by smoking may indicate latent disease of the coronary arteries.²⁶ The findings of abnormal ballistocardiograms before and after smoking in the offspring of hypertensive parents with coronary arterial disease are highly important. Changes seen after smoking or after sublingual nicotine administration suggest a direct myocardial or cardiac ganglion effect rather than a direct vascular effect.¹¹ Denicotinized cigarettes had no significant advantage over regular cigarettes.¹² Abstinence from tobacco has been shown to relieve cardiac symptoms in these sensitive people, and to allow return to normal of the BCG and the EKG. There seems to be evidence that smoking can cause damage to the myocardium. No patient with coronary disease

should chance the added risk to his heart imposed by smoking.¹³

Harvey states there are several prognostic conclusions to be derived from the ballistocardiogram.²⁷ A young normal individual who has chest pain and marked alterations in the tracing has myocardial disease. He further feels that an abnormal record in a person past 40 years of age may lead to optimism as regards his cardiac status, since many older people have abnormal tracings even though they are normal by all other means of examination. Anyone whose BCG record shows marked changes after smoking should be advised to stop. Persistence of a normal tracing even after smoking and the exercise test, should encourage a search for another cause of chest pain.

The clinical value of ballistocardiography still is limited. There appears to be considerable discussion as to what comprises the normal BCG;²⁸ and what the specific patterns for specific diseases are.²⁹ Some general rules, based on studies followed for long periods, are well documented. Some investigators have reported the rather frequent occurrence of abnormal ballistocardiograms among older people. A distinct abnormal tracing, on the other hand, among healthy young people is an unusual occurrence.^{30,31,32} Although at this time it is the consensus among clinical investigators that the ballistocardiographic method does not give accurate estimation of the cardiac output, it seems possible that refinements in the instrument will place this method among one of the important tools in our clinical armamentarium to be used in the evaluation of clinical cardiodynamics.

Ballistocardiography is going through a period of metamorphosis and is experiencing growing pains and indecisions. As a result, only an occasional specific pattern or fact appears available for dependable clinical application out of the volume of contradictory and conflicting information and data. It remains only for these data to be assorted, sifted, and sieved before they can be used with assurance as an aid in medicine. Most clinicians have a conservative attitude. This conservatism will remain until such time as a correlation of ballistocardiographic patterns with physiologic events within the cardiac generator can strengthen the position of the BCG. The progress of ballistocardiography has so far run parallel with that of electrocardiography, and

most likely someday it will be of equal importance in certain heart disorders. Although ballistocardiography is less empiric than electrocardiography, it is still in its adolescent stage and has not replaced electrocardiography. There is no doubt further experimentation and clinical follow-ups will reveal correlations between cardiac physiology and ballistocardiography and that it will facilitate clinical management of cardiovascular disorders.

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Primary Carcinoma of the Gall Bladder: The Application of Frozen Tissue Microsection

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On the surgical service of a 320 bed metropolitan hospital within a 12 month period, 1 January 1958 to 1 January 1959, eight instances of primary carcinoma of the gall bladder occurred. Within this same period there were 4,038 major surgical procedures, of which 123 were cholecystectomies; interpolation reveals that 6.5 per cent of the excised gall bladder specimens disclosed malignant change. A review of previous hospital records and of the recent literature^{2,3} discloses, by comparison, that the percentage incidence is higher than would ordinarily be expected.^{1,4} More significant was the finding that in only two (A.C. and A.W.) of these eight

cases did the surgeon indicate in the postoperative (gross) diagnosis that carcinoma was present, and this was done primarily because nodules were noted in the pericholecystic tissues and organs. Therefore, it seemed pertinent to reassess the present method of treating malignant gall bladder disease and to stress the application of available laboratory facilities.

A resume of these eight patients as to symptoms and signs disclosed that there was no singular preoperative finding that would denote early malignant disease of the gall bladder (Table 1). All cases occurred in female patients, whose ages ranged from 50 to 75 years; each case exhibited the clinical picture of either acute or recurrent cholecystitis. In four instances, gross visual examination at surgery disclosed that the gall bladder was markedly enlarged and contained purulent material and calculi; in three instances,

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(The above report is submitted in part fulfillment of Dr. Portillo's training requirements)

TABLE 1

Sex	Age	Symptoms & Signs	Duration	Gross Pathology	Operation	Micropathology	
M.R.	F	72	Pain, jaundice, nausea, vomiting, mass in R.U.Q.	1 day	G. B. enlarged,numerous calculi, common duct enlarged	Cholecystectomy T tube	Papillary carcinoma of G.B.
K.M.	F	50	Pain, nausea, vomiting, jaundice	1 week	G.B. distended, common duct dilated, obstruction in the intramural portion	Cholecystectomy T tube	Argentiffin carcinoma of G.B. Phlegmonous cholecystitis
T.D.	F	73	Recurrent pain, nausea, vomiting, jaundice, fatty dyspepsia	6 years	Thick adhesions around the G.B., numerous calculi, perforated G.B.	Cholecystectomy Drainage	Adenocarcinoma of G.B. Gangrenous cholecystolithiasis Mixed calculi
T.C.	F	52	Pain, nausea, vomiting	1 day	Distended G.B. adhesions, calculi	Cholecystectomy	Papillary adenocarcinoma
K.D.	F	67	Pain, nausea, vomiting	2 days	Abscessed cholecystitis, perforated G.B., calculi	Cholecystectomy	Carcinoma of G.B. Phlegmonous cholecystitis
A.C.	F	56	Recurrent pain, fatty dyspepsia	1 month	G.B. enlarged, lymph nodes enlarged, calculi, adhesions	Cholecystectomy	Carcinoma of G.B. Phlegmonous cholecystitis
M.F.	F	52	Pain, nausea, vomiting	2 days	Large calculi in the G.B., hypertrophy of the mucosa (gross)	Cholecystectomy	Cysto-adenoma, malignant Cholecystolithiasis
A.W.	F	65	Recurrent pain, jaundice, gray stools, pruritus, dyspepsia, mass in R.U.Q.	5 weeks	G.B. distended, presence peritoneum and liver of nodules in the	Cholecystectomy	Carcinoma of G.B.

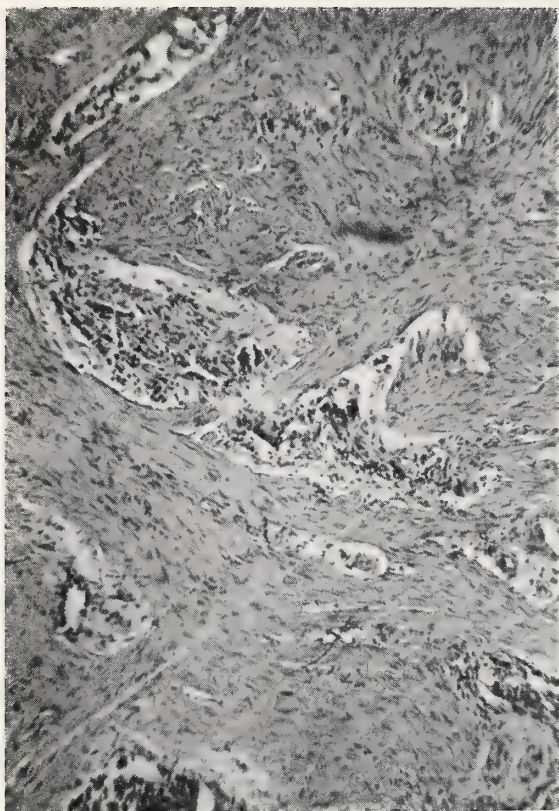


Figure 1. Case M. F. Gall bladder: Microsection discloses invasion of muscularis layer by pleomorphic mucosal cells (adenocarcinoma) (X 130)

there was a fibrosed, contracted gall bladder with calculi. In seven cases, the main cause of hospital admission was acute exacerbation of a recurrent abdominal pain; a right upper quadrant mass was noted in four patients. In each, a cholecystogram was performed and in none did the gall bladder concentrate sufficient dye to be discernible on X-ray examination. Seven cases disclosed an adenocarcinoma on histological examination (Figures 1, 2, 3, and 4); one case disclosed a rare malignant argentaffinoma.⁵

Primary carcinoma of the gall bladder is a microscopic diagnosis.^{6,7,8} Postoperative paraffin histologic sections are definitive as to the true nature of the disease process. At the time of the operation it was found difficult to denote satisfactorily the presence of malignant disease of the gall bladder due to the presence of concomitant or predominant inflammatory changes, or due to the minuteness of the area involved with neoplastic change. As a corollary, it would seem imperative that every diseased gall bladder excised at surgery, and prior to closure of the

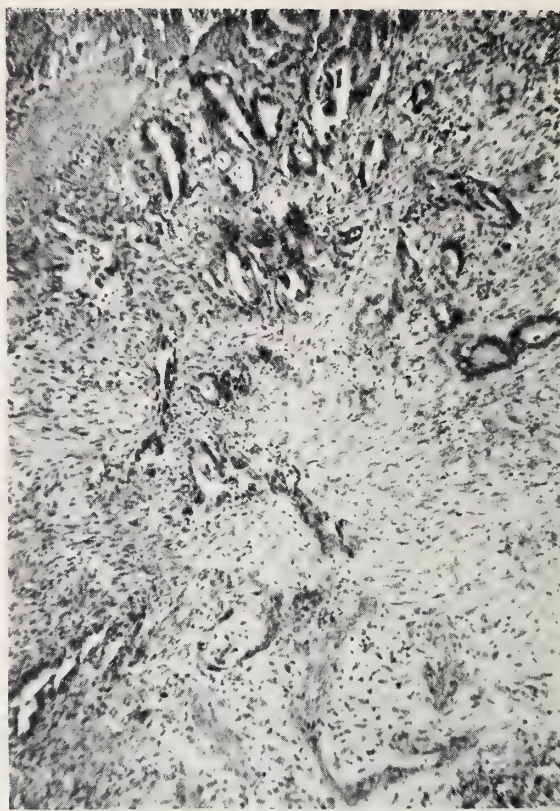


Figure 2. Case T. D. Gall bladder: Microsection demonstrates mucosal cells in alveolar arrangement and dispersed throughout the muscularis, the latter layer shows edema and round cell inflammation, supporting the gross picture of gangrenous cholecystitis (adenocarcinoma) (X 130)

abdomen, should be opened and inspected grossly as to the mucosal lining and the character of the gall bladder wall; areas which appear to be suspiciously neoplastic on this examination should be subjected to frozen section examination. Should the frozen section report malignant disease the surgeon can then, under advisement, extend the field of operation and perform a more applicable surgical procedure.

The presence of malignant disease, primary in the gall bladder, invokes the decision as to the most acceptable surgical procedure at the time or immediately subsequent to the time the diagnosis is made. Early in the course of the disease gall bladder carcinoma is prone to spread by direct extension, rather than by the blood stream or lymphatics. The inferior surface of the liver, the structures within the gastrohepatic ligament, the lesser omentum, the layer of peritoneum overlying the right kidney, the hepatic flexure of the colon, and the pancreas are the neighbor-

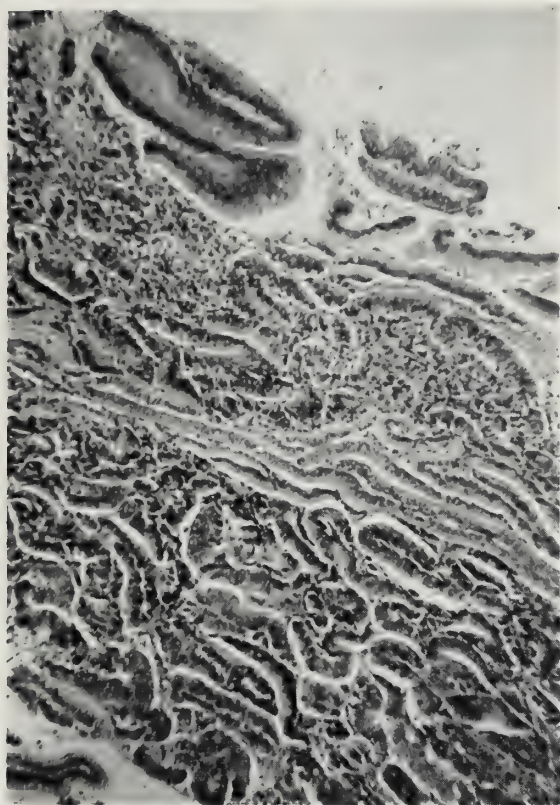


Figure 3. Case A. W. Gall bladder: Microsection discloses hyperplasia, hyperchromaticity, and loss of nuclear polarity of the mucosal cells (adenocarcinoma) (X 130)

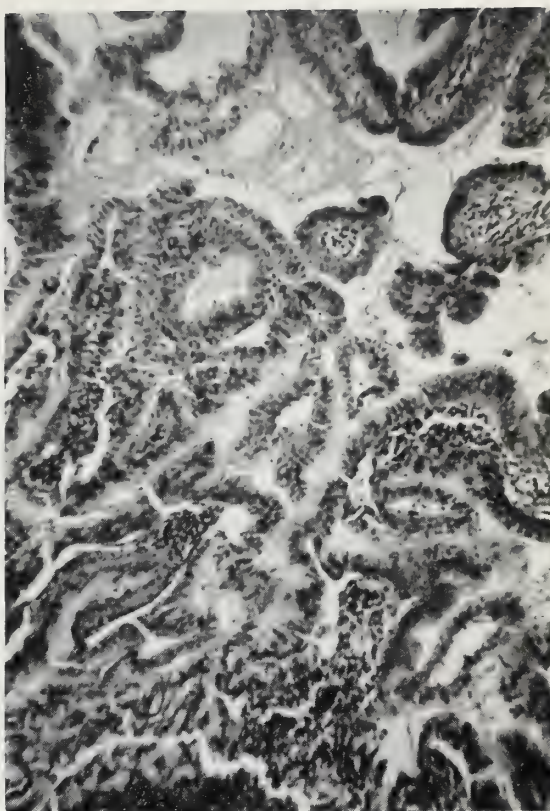


Figure 4. Case M. R. Gall bladder: Microsection shows pleomorphism, hyperplasia, and loss of nuclear polarity of the mucosal cells (adenocarcinoma) (X 130)

ing organs and tissues most often involved. There is no standard or generally accepted surgical procedure that may be applied when an isolated area of malignant neoplasia is found in the fundus of the gall bladder or when there is gross evidence of direct extension into a neighboring structure. It is feasible that a small isolated mucosal malignant neoplastic change may be adequately treated by simple cholecystectomy, but the survival period following an absolute diagnosis of gall bladder carcinoma is discouragingly short when large series of cases are reviewed. Partial or total hepatic lobe excision, careful stripping of nodes along the entire length of the extrabiliary passages, and en-bloc excisions have been applied,⁹ but often are inadequate as to completely encompassing the area of malignant spread. In spite of low five year survival rates surgery remains, at present, the only procedure that will give the patient an opportunity to survive. The application of radical en-bloc excision should be reserved for the middle-aged patient, in otherwise good health, who discloses

local hepatic extension of the primary gall bladder lesion; the isolated intra-vesicular lesion is perhaps better managed by a standard cholecystectomy. In the aged, the indicated procedure should be palliative — e.g., excision of a painful mass, decompression of obstructive jaundice, and/or drainage of vesicular empyema.

SUMMARY

Within a 12 month period on the surgical service of a private hospital an increased incidence of primary carcinoma of the gall bladder has been noted. To more clearly delineate patients in whom an extensive surgical procedure might render a higher survival rate, gross inspection of the excised opened specimen at the time of surgery and immediate frozen microscopic section of suspected areas of malignant change should be considered as a procedure worthwhile for routine application.

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What others are doing

There is no question but what Blue Cross has made a major contribution to the existence of private voluntary health insurance. However, there were some things which Blue Cross either couldn't do or which could be done more effectively by insurance companies. For example, the large employer with branches spread country-wide found it more satisfactory to work out a uniform plan for his employees through a single insurance carrier rather than to undertake the enormous task of negotiating with dozens of local Blue Cross plans. In a great number of cases the hospital insurance is only part of a broad package plan including life insurance, pensions, and disability benefits that can be more economically administered by a single carrier. Also, through its existing mechanism for underwriting individual applicants, the insurance industry was prepared to attack the problem of making coverage available to individuals who were not eligible for group insurance through an employer. This was an area not usually undertaken by the Blue Cross plans.—*Raymond F. Killion, Activities of the Health Insurance Council; Their Impact to Date; Legislative Implications; an Assessment of the Future. Talk at the 68th annual meeting of the Association of Life Insurance Medical Directors of America, October 23, 1959 at the Hotel Statler Hilton, New York.*

Government subsidizes some, taxes others

So-called government insurance schemes traditionally have operated upon a basis of subsidizing one group and making up deficits by taxation of other groups. This has been a principal complaint of insurance spokesmen against such schemes. It is ironic that insurance companies should be forced to operate in the same way when adequate rates are refused them. Yet this seems to be precisely what many companies are getting into in writing automobile liability coverage in certain areas.

Suppose the state of New York had set up, a few years ago, a state fund that was given a monopoly on writing automobile liability insurance. Suppose that, for political or other reasons, it had been required to use the same rates that the insurance companies have been forced to use during the period when rate increases were refused by the state regulatory authorities. Presumably this hypothetical state fund would have incurred about the same deficit the companies incurred during the period. Such a fund would have needed an appropriation from the state's general revenues to make good its deficit. Insurance companies have had to make up the deficit out of moneys contributed by policyholders of other states and holding other types of policies. *Walter E. Otto, Insurance is Still Competitive, J. Am. Insurance July 1959.*

The Illinois Department of Public Health's Responsibilities and Programs Related to the Aging Population

ROLAND R. CROSS, M.D.,* SPRINGFIELD

With its population threatening to exceed the 10 million mark in the near future, and a growing percentage of that population living beyond 65 years of age, Illinois is increasingly turning its attention to the needs and problems of an aging population, and to the resources necessary to deal with this population trend. Within five years, it is estimated that one out of every 10 persons living in Illinois will have reached 65 years of age. It is without question that an aging population is confronted with medical and social problems vastly different from those experienced in the past. Cancer, arteriosclerosis, diabetes, arthritis, and senile psychosis make up the medical problems of the day. As a result, the provision of adequate care for the elderly person is of increasing concern to a growing number of Illinois families.

We would be remiss if, after successfully adding years to our lives, we made no effort to cope adequately with these added years. It is important, therefore, that this problem be looked upon as a responsibility of the entire community, and that all resources—medical, social, and economic—be brought to bear upon it. The economist, the sociologist, the public health physician, and many other professions necessarily must join the medical practitioner in seeking solutions to the problems of aging.

The Illinois Department of Public Health, through its programs of chronic disease control, dental health, nutrition, tuberculosis control, and hospital and nursing home licensure, is working to prevent chronic medical conditions, and to bring about adequate care facilities for

the aged person. It recognizes its responsibility for working with the medical profession in providing leadership, direction, and co-ordination in an effort to solve or improve the health problems of the aged.

The State Legislature in 1945 authorized this Department to license nursing homes in an effort to assure the maintenance of proper standards of care and safety. A revision of this legislation in 1957 designated three types of institutions to be licensed—namely, nursing homes, shelter care homes, and homes for the aged. To assist in reviewing and approving standards for the three types of institutions, the Department has an Advisory Committee that includes a representative of the Illinois State Medical Society.

There are approximately 632 nursing homes, 102 shelter care homes, and 14 homes for the aged licensed in Illinois. Each of these institutions differs in the extent and type of care given, and are defined by law as follows:

A. Nursing Home means a private home, institution, building, residence or other place, whether operated for profit or not, or a county home for the infirm or chronically ill that provides, through its ownership or management, maintenance, personal care, or nursing for three or more persons, not related to the applicant or owner by blood or marriage, who—by reason of illness or physical infirmity—are receiving such care.

B. Shelter Care Home means a private boarding home, institution, building, residence, or other place operated for profit which—through its ownership or management—provides shelter care to three or more adults who are not related to the applicant or owner by blood or marriage.

C. Home for the Aged means any home operated not for profit under the auspices of re-

Director, Department of Public Health, State of Illinois.

This is the second in a series of articles sponsored by the Committee on Aging.

**Deceased.*

ligious, fraternal, charitable, or other nonprofit organization or operated not for profit under an endowment, which—through its ownership or management and as principal objective—provides maintenance, personal care, nursing, or sheltered care for aged persons, and in the conduct of which provides such service or services to not less than three persons over 60 years of age who are not related to the applicant or owner by blood or marriage.

Licensing, however, is only a part of this Department's program for improving the care of the aged. Special consultants in the area of nursing, nutrition, business management, and nursing aid training are available to administrators of care institutions in Illinois. Through the co-operation of the University of Illinois, and the State Nursing Home Association, annual workshops and conferences are conducted with the objective of improving the care of the aged.

Realizing that not all of the aged persons in the state are residents of institutions, the Department is actively encouraging and assisting local, full-time health departments in the development of adequate local programs for aged persons. One such activity receiving much attention at present is the program of care for persons in their own home. In several Illinois counties, the local health department has been instrumental in promoting a co-ordinated movement in the community to provide home nursing services. The objectives of such a program are to make it possible for older persons and persons afflicted with chronic disease to remain in their own homes rather than to be put into a nursing home simply because they require occasional nursing care.

Closely allied with the objectives of the institutional care program is the interest of the Department in research and study regarding health requirements of the aged person. A survey of the mouths of 2,154 patients at the Oak Forest Chronic Disease Hospital was completed recently by the Department in co-operation with the U.S. Public Health Service. The findings and dental needs are now being tabulated. This survey followed the examinations of the mouths of 642 persons in eight nursing homes in Northeastern Illinois where it was found that three out of every four residents of nursing homes required some dental treatment.

The Department also has undertaken a study of the effect of denture cleansers on persons in nursing homes in two central Illinois counties. Over 400 patients with full dentures were given denture brushes, denture baths, and denture cleansers with instructions as to their proper use. Dentures were examined during the initial visit and at monthly intervals. A compilation of these findings will be available at a later date.

A serious look is being taken by all health interested agencies at the means for meeting the problems of an aging population. The State Health Department believes that progress toward meeting these needs will depend upon co-ordinating and integrating at the community level the resources now available for the aged and chronically ill. With all the resources that it can command, the Department intends to work with the agencies, organizations, and societies in Illinois in promoting measures that will prevent some of the disabilities and problems resulting from degenerative diseases characteristic of the aged.

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CASE REPORTS



Melena Artefacta

WALTER W. SILBERMAN, JR., M.D., CHICAGO

Melena vera is an alarming finding, since altered blood in the feces usually is attributable to serious pathologic phenomena involving the alimentary canal.¹ Various agents, however, may cause discoloration of stool simulating true melena. The following case represents a rare etiologic agent of melena artefacta.

A 34 year old white male physician was admitted to Passavant Memorial Hospital May 11, 1958 at 12:30 a.m., complaining of three episodes of tarry stools since 4:00 p.m. the preceding afternoon. The stool was soft, of moderate amount, and jet black. At no time did he notice pain, weakness, nausea, hematemesis, or associated gastrointestinal symptomatology. He reported a moderate amount of flatus. He denied the ingestion of iron, licorice, spinach, beets, or bismuth—agents known to cause black discoloration of feces.

His past history revealed that he had always reacted to emotional stress with vague, mild epigastric distress and with loose stools. A gastrointestinal X-ray series was reported normal in 1948. In the preceding three months his first child had been born, his wife had undergone abdominal surgery, and he had been working harder than usual.

Physical examination revealed an anxious ap-

pearing, somewhat pale individual who was perspiring freely. His pulse was 104, blood pressure 140/82, temperature 99.4° F., respirations 26 per minute. The mucous membranes were dry. The heart and lungs were normal. There were no masses, tenderness, or enlarged organs palpated in the abdomen. The neurological examination was within physiologic limits. The rectal ampulla contained a small amount of soft, black stool. This stool proved to be both guaiac and benzidine negative. The reagents used were fresh and checked with known positive controls. Hematological studies showed a hematocrit of 51.9 per cent, a hemoglobin of 17.2 gm. per cent, a white blood count of 10,850 per cubic centimeter with normal differential, and an erythrocyte sedimentation rate of 7 mm. in an hour. The urinalysis was negative.

It was decided to keep the patient under observation for a brief period. A light diet and mild sedation were prescribed. At 6:30 a.m., he suddenly recalled that in the foregoing 24 hours he had ingested two quarts of grape juice. Furthermore, during the preceding 12 hours he remembered violent borborygmi and large amounts of foul smelling flatus. Following this new information the patient was promptly discharged from the hospital. Within 24 hours, the color of the feces lightened and he had no recurrence of symptoms during the following year.

Resident in Surgery, Passavant Memorial Hospital, formerly Intern in Medicine.

COMMENT

Relief at this explanation of the benzdine negative melena was tempered with curiosity concerning the role of grape juice in producing black discoloration of feces. A review of the recent literature was unrewarding. In 1941, however, Portis and Fishbein proposed a bacteriologic explanation for the laxative effect of grape juice. They reported a definite increase in the gram positive flora of the gastrointestinal tract following administration of 24 ounces of grape juice a day for two to four weeks, followed by maintenance doses of eight ounces daily. Individuals who were habitually constipated were able to abandon laxatives following the addition of grape juice to the diet.² Potassium bitartrate, present to approximately six-tenths per cent in grape juice, undoubtedly adds to its laxative effect. Portis and Fishbein made no mention of the occurrence of black stools among their 50 subjects and their original data are no longer available.

It is known that grape juice contains anthrocyanin pigments and is rather rich in tannin

compounds which may combine with iron to produce black discoloration of the feces.³ At present there is no information on the fate of these pigments during the digestive process.

The case of a nursing instructor who noted a similar episode of melena artefacta after she enjoyed a large quantity of grape juice also has come to my attention.

SUMMARY

1. A case of melena artefacta due to grape juice is presented.

2. The laxative action of grape juice is reviewed.

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My thanks are due to R. Barratt Terry, M.D., for his encouragement and permission to publish this case.

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Inguinal Ectopia in a One Month Infant

LAWRENCE S. MANN, M.D. AND ISADORE LERNER, M.D., CHICAGO

Inguinal ectopia, or sliding hernia, in an infant is an unusual condition, particularly when there is incarceration of the adnexa. Potts, Riker, and Lewis found that seven per cent of infant hernias were in females, whereas three per cent had a sliding hernia of ovary and tube.¹ Mayer and Templeton reviewed the literature and presented a case of their own.² Several other cases have been reported.³⁻⁷ Duren believes that in these instances the fallopian tube fails to form its normal mesentery between the round ligament and ovary. Therefore, it becomes attached too closely to that portion of the gubernaculum that forms the distal portion of the round ligament being pulled into the canal of Nuck. The ovary is then pulled into the hernial sac and may become incarcerated within the sac outside of the external inguinal ring.⁸

A one month old infant was admitted to Mount Sinai Hospital with swelling in the right inguinal region that was firm, discrete, and about two cm. in diameter. The mother had noticed this mass one week prior to admission. The infant (a first child) was full term upon normal delivery, labor lasting seven hours. She weighed six pounds 13 ounces at birth and upon admission, weighed eight pounds three ounces. Blood count and urinalysis were within normal limits. Physical examination revealed a firm, oval shaped, irreducible mass that did not transmit light presenting through the right external inguinal ring. This was thought to be an incarcerated right inguinal hernia and surgery was advised. A cyst, lipoma, and lymphatic enlargement were considered in the differential diagnosis.

From the Departments of Surgery and Pediatrics, Mount Sinai Hospital, and the Department of Surgery, Chicago Medical School.

Preoperatively the infant was given 1/600 grain atropine sulfate. Under drop ether anesthesia, a transverse incision was made in a skin crease. An incarcerated sliding right inguinal hernia containing tube and ovary was found. The tube and ovary were returned to the abdominal cavity, care being exercised not to compromise the blood supply. The sac was isolated, closed with fine silk, and the redundant portion excised. The closure was performed in layers in the usual manner. The skin was closed with a subcuticular stitch and a liquid plastic dressing applied. The infant was placed on a liquid Similac® formula postnausea and was discharged from the hospital on the second post-operative day. A two year followup revealed no evidence of recurrence.

SUMMARY

A case of incarcerated sliding right inguinal hernia in a one month old infant containing the right tube and ovary is presented.

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Clinical-Surgical Conferences



Hemoperitoneum

***Department of Surgery
Cook County Hospital***

Moderator:

ROBERT J. FREEARK, M.D.
Director of Surgical Education
Cook County Hospital

Discussants:

EARL GARSIDE, M.D.
Associate Professor of Surgery, University
of Illinois College of Medicine; Attending
Surgeon, Augustana Hospital

ROBERT L. SCHMITZ, M.D.
Associate Clinical Professor of Surgery,
Stritch School of Medicine of Loyola Uni-
versity; Attending Surgeon at Mercy and
Cook County Hospitals

Dr. Robert J. Freeark: The cases to be discussed this morning will be presented as diagnostic problems. In identifying the subject as hemoperitoneum, perhaps we have permitted our discussants an undue advantage. Yet if you will consider the numerous and diverse diseases that may be associated with blood in the abdominal cavity, you can readily appreciate that our guests will not have an easy time of it. I have little fear for their success, however. Their reputation and experience leave no question as to their qualifications for solving our diagnostic dilemmas.

Dr. Earl Garside was an attending surgeon at Cook County Hospital during the 1940's and enjoys a position of high regard among the surgeons of this state and nation. His association with Augustana Hospital has provided him with

an unusual experience in one of the important aspects of hemoperitoneum, specifically the evaluation of blood loss by radioisotope blood volume determinations. We look forward to his assessment of its value in the problems of the clinical surgeon.

Dr. Robert L. Schmitz is one of the most highly regarded additions to the surgical attending staff of Cook County Hospital. An outstanding surgeon, his vast and up to date knowledge of the theory and practice of surgery are coupled with a devoted interest in the training of younger men. In his short tenure at Cook County Hospital he has attained a position of high esteem in the eyes of that group so notoriously difficult to impress—the surgical resident staff.

Case 1.

Dr. Richard Grossman (Surgical Resident): This 23 year old Negro female entered Cook County Hospital on January 23, 1959, with a history of sudden onset of nausea and vomiting on the evening prior to admission. Several hours later she noted the onset of acute constant right lower quadrant pain which was present in the lower sacral region also. Position changes caused marked aggravation.

Systemic review revealed that the last normal menstrual period had occurred from January 1 to 4, 1959. The period preceding this had been normal 28 days previously, but on January 17 she had noted mild menstrual bleeding with clots for 12 to 14 hours. Since then she had noted only slight clear vaginal discharge.

On physical examination the blood pressure was 132/76 mm. Hg. pulse rate 110 per minute, temperature 98.6° F. rectally. Significant findings were limited to the abdomen which was flat, semi-rigid, and diffusely tender. Rebound tenderness was elicited readily and referred to the right lower quadrant. Bowel sounds were present but reduced in frequency. On pelvic examination the vagina and cervix appeared normal. Marked tenderness was elicited by movement of the cervix but the cul-de-sac was not bulging. Uterine and adnexal configuration were not easily established because of abdominal guarding.

The hematocrit was 38 per cent, leukocyte count was 9,000, and platelets were adequate on smear. Urinalysis and scout X-ray films of the abdomen were negative.

Approximately five hours after admission the patient developed bilateral shoulder tip pain. Diagnostic paracentesis in the right lower quadrant returned 20 cc. of nonclotting blood.

Dr. Freeark: This is a 23 year old girl who had a story and findings compatible with acute appendicitis but the normal temperature suggested something else and the diagnostic paracentesis gave further information. Dr. Garside, will you lead off?

Dr. Earl Garside: As the title of this conference is hemoperitoneum I would like to discuss briefly the diagnostic considerations when faced with this problem. Figure 1 lists some of the things we should consider and is a broad classification of the etiologic factors. I shall use it as a basis for this discussion.

The first question to ask is, "Is the condition postoperative?" This is most frequent in surgery of the great vessels, in splenectomy, or even in appendectomy, but no intraabdominal procedure is exempt from this complication.

Hemoperitoneum resulting from trauma usually is obvious but do not be too hasty to dismiss it as a factor in the absence of good history of injury. I was once called into the operating room by a gynecologist who had made a preoperative

diagnosis of ruptured ectopic pregnancy. The patient, a waitress, had positive cul-de-sac aspiration of blood, phrenic nerve pain over the shoulder, and the menstrual history was compatible with ectopic pregnancy. But after making a low midline incision and with his hand in the abdomen, it did not take the gynecologist long to recognize that the bleeding was from a ruptured spleen. It took a lot of questioning after the operation to find out that 10 days before, this woman had been in a fight and had received the impact of a knee in her left epigastric region. So trauma should always be considered. Do not dismiss it lightly as a cause of hemoperitoneum. Ask very carefully about it.

Spontaneous vascular rupture makes us think immediately of aortic aneurysm or aneurysm of smaller abdominal vessels and the occasional rupture of a small arteriosclerotic vessel that is not aneurysmal. In a recent report of 120 cases of bizarre hemoperitoneum, one was the rupture of a small artery in the pancreas which at post-mortem showed only arteriosclerosis.

Gynecologic conditions should perhaps head this list as they account for 68 per cent of all cases of hemoperitoneum in both sexes. Under that heading we should consider ectopic gestation, ruptured graafian follicle, and ruptured endometrial cyst.

Miscellaneous causes include blood dyscrasia, spontaneous splenic or hepatic rupture, and a host of conditions in which a peritoneal transudate is blood tinged. I remember one case in which the terminal ileum was the site of obstruction in the presence of purpura. Such a purpuric condition should be diagnosed by tourniquet test, platelet count, and so on. In this instance, an intramural hematoma had resulted in intraluminal narrowing. Spontaneous rupture of an organ like the spleen has been reported in many primary blood diseases and even in infectious mononucleosis. Rupture of the infected liver has been reported too but this is more likely to occur in primary tumor or metastatic lesions of this organ. Conditions that are not of true hemoperitoneum character but show peritoneal transudate which is blood tinged often are baffling. Here we think of acute hemorrhagic pancreatitis in which pancreatic exudate is excessive and contains frank blood, but it should not be classed as a true hemoperitoneum.

With these introductory remarks let us turn

Figure 1. Classification of Etiologic Factors in Hemoperitoneum

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1. Postoperative
 2. Trauma
 3. Spontaneous vascular rupture
 4. Gynecologic
 5. Miscellaneous
-

now to a consideration of the case presented by Dr. Grossman. The pertinent findings are the onset of abdominal and pelvic pain 19 days after the last menstrual period, the presence of hemoperitoneum as verified by paracentesis, and generalized spread of blood in the peritoneal cavity as evidenced by phrenic nerve pain five hours after admission. The pelvic findings and the location of abdominal tenderness on admission indicate that the pelvis is the origin of the process.

The most important and frequent cause of massive peritoneal hemorrhage of pelvic origin is ruptured ectopic pregnancy. The part of the tube that holds the gestational sac becomes so swollen and distended by the outpouring of blood it ruptures. Blood from the eroded artery finds its way into the peritoneal cavity either directly in the case of extratubal rupture, or from the fimbriated end of the tube. It rarely enters the uterus. The amount and rapidity of bleeding depend upon the size of the artery. If the site of the tubal gestation is near the fimbriated end, early extrusion of the sac is expected. If the sac is near the uterus, considerable time will elapse before it ruptures. About one-third of these may occur when the pregnancy is not more than 14 days old. In many cases there is no amenorrhea. Vaginal examination will elicit tenderness on movement of the cervix and tenderness in the tubo-ovarian region on the affected side. If the bleeding is massive at the onset, the initial symptoms are followed rapidly by diffuse lower abdominal pain.

In this case, the onset of nausea and vomiting would indicate peritoneal irritation. This no doubt was initiated by the intraperitoneal presence of blood. The amount was not sufficient to show the immediate symptoms of hypovolemia, as evidenced by the blood pressure of 132/76 mm. Hg. and hematocrit of 38 per cent. However, a pulse rate of 110 per minute with a normal temperature may be significant evidence of reduced blood volume. In this connection the blood volume immediately upon admission may be informative. Blood volume studies at present suffer from limitation of wide application. We have had quite a bit of experience with plasma volume determinations using I^{131} tagged albumin. The study can be completed in 10 minutes but, unless carefully done, it may be inaccurate. Blood volume determinations are particularly valuable when they are repeated, to provide a

baseline on which to start blood volume reckoning. The status of a patient's vascular compartment may be evaluated clinically when first admitted. But should bleeding continue, and if repeated blood volume determinations are run, we will have a baseline to judge the progress of the patient and know if he is losing blood as rapidly as it is being given to him. The course of action can be determined soon from these observations.

Here is a patient admitted after a considerable period of time who apparently has no real serious problem of hypovolemia, but five hours later, shoulder tip pain develops, suggesting hemoperitoneum. Ectopic pregnancy may not have been suspected at first or more information might have been obtained in this five hour period. Earlier cul-de-sac puncture probably would have been done, or a Friedman's test for pregnancy. The statement that the vagina and cervix appeared normal is compatible with early ectopic pregnancy. Cul-de-sac puncture is the usual diagnostic procedure in these cases but here, with paracentesis made in the right lower quadrant and 20 cc. obtained, it would seem to me that this indicated a fair degree of hemoperitoneum.

A ruptured graafian follicle may continue to bleed excessively, and milder or infrequent recurrences of this condition have been reported. Maturation of the ovum and rupture of the follicle normally occur in the midmenstrual cycle. More than normal or continuing bleeding gives rise to peritoneal irritation which in turn causes nausea and vomiting. Pain and abdominal findings are referable to the involved side. In the right ovary, the similarity to appendicitis is always confusing. In this case the onset of symptoms was past the midmenstrual cycle but that does not exclude the diagnosis of rupture of the follicle. The amount and distribution of the blood is compatible with ruptured follicle. Many people think that if the bleeding is slight, it would indicate ruptured graafian follicle; and if it is excessive, it would mean ruptured ectopic pregnancy.

Endometriosis in the Negro is rare, but in this case the presence of a ruptured endometrial cyst could be considered. It can give peritoneal irritation causing nausea, vomiting, abdominal rigidity, right lower quadrant tenderness, and leucocytosis. Careful study of the blood would rule out blood dyscrasia. A normal blood platelet

count speaks against purpura. Skillful questioning should rule out trauma and the possibility of delayed hemorrhage.

Dr. Freeark: You think it is a gynecologic condition?

Dr. Garside: I did not say that.

Dr. Freeark: Would you commit yourself?

Dr. Garside: I would say this: We have hemoperitoneum in this patient 19 days after her last menstrual period. The possibility of ectopic pregnancy must be borne in mind as a most frequent cause. We would like a closer clinical evaluation of this case because there are several loopholes. The presence of nausea and vomiting indicates peritoneal irritation, but she did not show a massive hemorrhage at the onset. This patient could easily have had a ruptured graafian follicle that would account for the nausea and vomiting. It is not too far out of line with the menstrual cycle. The distribution of blood is characteristic and not excessive, even after a five hour delay. It would be almost impossible, with the information given, to establish a differentiation between ruptured follicle and bleeding ectopic pregnancy of the right tube. We would think first of ruptured follicle in the presence of a relatively mild type of hemoperitoneum and the slowness of onset of nausea and vomiting. We must be aware that ruptured ectopic pregnancy and ruptured graafian follicle of this magnitude both demand surgical intervention.

Dr. Freeark: Dr. Schmitz, would you care to climb out on the limb?

Dr. Robert L. Schmitz: I thought there were several clues in this history. For instance, the acute onset of pain in the right lower quadrant suggested that the disease process began there. There were some menstrual irregularities, although they were not impressive and, as the course of the disease progressed, there was evidence of generalized peritoneal irritation as well as other localizing signs. The fact that she had shoulder tip pain suggested that something went to the diaphragm and began to irritate. Without other information I thought we could rule out the appendix and the cecum and I settled on the adnexa. For some reason I thought of twisted ovarian cyst first because the blood did not clot, and I thought it might fit in this classification of bloody exudates rather than straight intraperitoneal bleeding. My other thoughts were (1) ectopic pregnancy; (2) ruptured ovarian cyst

which would include the graafian follicle; (3) a process that would drain down the gutter to the right lower quadrant and I wondered about hemorrhagic pancreatitis with leaking down the gutter in this patient. That is all I could come up with.

Dr. Freeark: How do you feel about needle aspiration in such an abdomen?

Dr. Schmitz: I like peritoneal tap. I have had instances where I thought there was definite help from it. Some feel that you should be so astute clinically that you should not have to rely on tap, but none of us is so brash as to say we do not need X-ray diagnosis these days. If there is some test that will help to verify our clinical examination we should use it, and I think this test fits in. There is no great hazard to peritoneal tap. Even if you perforate the bowel no great harm comes of it. There are several techniques for tapping, but I think the simplest is to use a 10 to 15 cm. size 18 needle with a stylet. I would simply insert it, under local anesthesia, in the abdominal quadrant where you think there will be findings. The posterior fornix of the vagina may be used as well. The stylet is withdrawn and the needle observed first for spontaneous drainage. Then a 10 to 20 cc. syringe is attached and gentle aspiration attempted. In certain instances, if the tap is negative, it is well to repeat it in another hour or so. Some recommend putting in four needles, one in each quadrant at the same time, and observing for spontaneous drainage. Occasionally I thread polyethylene tube through the needle up into the peritoneal cavity and leave it in place for several hours for repeated testing. A negative tap may be helpful if you are sure you are in the peritoneal cavity. If you get blood as you withdraw the needle, you have to be sure you have not entered an intact vessel. Such blood invariably will clot. As little as 200 cc. in the peritoneal cavity will give a positive tap.

Dr. Garside: I am in favor of peritoneal tap. I never feel embarrassed about doing everything I have to do to make a diagnosis. The 20 cc. of nonclotting blood found here indicates definite hemoperitoneum. I think peritoneal tap is a safe procedure.

As for the possibility of ovarian cyst with a twisted pedicle in the case presented, I have rarely seen this condition give 20 cc. of blood. It is possible but I more or less discounted it

because of the very large amount of hemoperitoneum.

Dr. Freeark: At the time of laparotomy this was hemoperitoneum of gynecologic origin. The patient had over 1000 cc. of blood in the abdomen. The initial impression that the disease was ectopic pregnancy was quickly dispelled when the tube was found to be grossly normal and active hemorrhage was observed from a ruptured physiologic corpus luteum cyst of the ovary. Bleeding was readily controlled with suture ligation. Following removal of blood from the abdomen the procedure was terminated and the patient went on to an uneventful recovery.

Dr. Schmitz, how do you handle blood that has collected in the peritoneal cavity? After arresting the hemorrhage many prominent surgeons feel it should remain untouched to provide a basis for restoration of depleted blood volume.

Dr. Schmitz: The evidence is conflicting. If radioactively tagged blood cells are left in the peritoneal cavity, radioactivity appears in the peripheral blood shortly afterwards. This need not mean that the blood cells have been taken up intact since the tagged hemoglobin alone may have been utilized.

But I think there are disadvantages to leaving blood in the peritoneal cavity. It is likely to cause excessive adhesions, and it is an excellent culture medium for any infection which may occur. I prefer to wash it out and give whole blood by vein, if needed.

Case 2.

Dr. Eugene Broccolo (Surgical Resident): This 33 year old Negro female entered Cook County Hospital on May 15, 1959, complaining of six days of generalized abdominal pain and three days of protracted nausea and vomiting. Onset followed a drinking spree, and she admitted to drug addiction, chronic alcoholic excesses, and uncertainty as to events preceding the onset of her complaints. Pain was localized in the epigastrium and left upper quadrant, and was associated with a temperature of 100° F., blood pressure 130/80 mm. Hg., and pulse rate of 108 per minute. There was moderate epigastric tenderness with rebound, voluntary rigidity, and hypoactive bowel sounds. There were no abdominal scars, masses, or palpable organs. Pelvic examination was unremarkable.

Four roentgenograms of the abdomen showed

no free air but the small and large intestine contained gas, and a diffuse haziness over the entire abdomen was noted. Urinalysis was negative. Hematocrit on admission and again 12 hours later was 40 per cent. Blood amylase was 64 units, and urine amylase 128 units (normal for both determinations is 32 units or less).

The patient was transferred from the medical service with a suspected acute pancreatitis, and diagnostic paracentesis to confirm this impression returned 5 cc. of nonclotting blood.

Dr. Freeark: It is not our practice to use abdominal paracentesis indiscriminately, but here we had a rather confused and prolonged story. She was not a reliable historian and several things did not fit in. She was not seen or observed by the surgical service originally, and paracentesis was undertaken to confirm a clinical diagnosis made on the medical service. *Dr. Schmitz,* how would you analyze this patient's problem?

Dr. Schmitz: Again let us pick out the important clues. There is a relatively long history. The story of alcoholism is important, not only as to possible etiology but because the history as obtained may be inaccurate, particularly with regard to trauma. There are localizing signs in the epigastrium and left upper quadrant. The serum amylase is moderately elevated. The generalized haziness on roentgenogram of the abdomen speaks for a large amount of intraperitoneal fluid, and there is evidence of ileus on the roentgenograms. The peritoneal tap shows hemoperitoneum.

My diagnoses in order of likelihood are: (1) pancreatitis with hemorrhagic features, (2) ruptured spleen, (3) cirrhosis of the liver with hemorrhage from torn collaterals, (4) a leaking aneurysm, and (5) forme fruste perforation of a peptic ulcer with hemorrhagic peritonitis.

It would be helpful to know what the amylase level was in the peritoneal fluid. In pancreatitis, this value may reach 20,000 units. The serum and urine levels of amylase as recorded represent only moderate elevations and are not pathognomonic of this disorder. We do not rest easy with the diagnosis of pancreatitis when the clinical picture is atypical and the amylase elevations are borderline. Most of the causes for such false elevations are conditions demanding operative intervention.

As mentioned earlier, ruptured spleen must always be considered. A diseased spleen is more prone to spontaneous rupture and the chronic alcoholic with superimposed drug addiction may have a splenomegaly on the basis of several disease processes. Just how many spontaneous ruptures are truly "spontaneous" is difficult to determine because mild trauma that is easily forgotten may be responsible. Certainly the many falls and frequent jostlings of the alcoholic provide countless opportunities for such injuries. Advanced cirrhosis of the liver and leaking aneurysms seem unlikely in this age group, although not impossible. The self-sealing form of perforated ulcer seldom gives a grossly bloody fluid but may result in hemorrhagic exudates much like pancreatitis. I rest uneasy with a diagnosis of hemorrhagic pancreatitis but, in view of the history and laboratory findings, I would have to place it as my number one choice.

Dr. Garside: Certainly in this case we have the responsibility of ruling out acute pancreatitis. This is primarily a disease of the middle-aged, although it is seen in others. It is more prominent in women, and 80 per cent of the cases have associated biliary tract disease. A diagnosis of acute pancreatitis is a contraindication for surgery. It becomes, therefore, a matter of immediate necessity to differentiate pancreatitis from the following acute upper abdominal conditions that may require emergency surgery: Acute cholecystitis, perforated peptic ulcer, acute intestinal obstruction, mesenteric thrombosis, and some unusual catastrophe. Any operation at the height of acute pancreatitis is hazardous, so it is imperative that a diagnosis be made on clinical and laboratory data and not by exploratory laparotomy.

The presence of alcoholism in this case calls for attention. A correlation between pancreatitis and alcoholism is high. The possible mechanism may be increased pancreatic secretion secondary to excessive gastric secretion of hydrochloric acid under alcoholic stimulus. This would cause increased intraductal pressure with rupture of the small ducts and pancreatic acini. Perhaps increased edema and spasm of the sphincter of Oddi are produced by the direct effect of alcohol on the duodenum with resultant interference in pancreatic outflow.

In acute pancreatitis, the prodromal symptom is pain which is severe. Pain is epigastric and is

localized to the left of the midline. Less frequently it may be localized at the level of the 1st and 2nd lumbar vertebrae.

The evaluation of this patient's pain from the history is difficult. It may have been modified by alcohol and drug addiction. Nausea and vomiting appeared early and continued. Distention developed soon after the onset. Roentgenographic examination in this case showed gas in both large and small intestines with characteristic hypoactive bowel sounds. The haziness is compatible with pancreatic exudate that cannot be referred to as true hemoperitoneum. Pancreatic stones are sometimes seen on X-ray and their presence suggests a diagnosis of pancreatitis. These stones are more characteristically seen in exacerbations of chronic recurring pancreatitis. X-ray may show cholelithiasis.

The most important laboratory test is the serum amylase. In this case, even normal levels of amylase in the blood and urine would not speak against pancreatitis since the tests were run late after the onset. In a fulminating case with necrosis the amylase may never be elevated. It rises rapidly almost immediately after the onset of acute pancreatitis. After a day or two, it begins to go down so after six days not too much dependence can be put upon it. The urine amylase goes up and down more slowly.

Hemoconcentration is found in severe cases with shock. In this patient there was no shock picture. The hematocrit was normal.

An elevated blood sugar is seen in half the cases. The urine showed no sugar here. If acute pancreatitis is suspected, diagnostic paracentesis may be helpful, especially when the case is first seen after several days. The peritoneal fluid level may represent the last remaining evidence of elevated amylase. Serum amylase is high in perforated peptic ulcer for the same reason that it is high in pancreatitis: because the pancreatic enzyme bearing fluid is pouring into the peritoneal cavity and, by absorption, results in a high level in the serum. The absence of free air is evidence against, but does not rule out, perforated ulcer.

The presence of trauma as a cause of acute pancreatitis is a possibility that has to be considered in any alcoholic or drug addict. Traumatic rupture of a viscus must be considered here, but from the data given, evaluation of its role would be difficult.

Dr. Freeark: We thought this patient was a problem seen not infrequently on the surgical wards. She had a history compatible with a number of things but it boiled down to pancreatitis or trauma. Dr. Schmitz, if you are troubled with such a case, do you find the X-rays of much help?

Dr. Schmitz: X-ray studies may be helpful in diagnosing ruptured spleen. Chest X-ray may show elevation of the left diaphragm and/or a small amount of fluid above it. Fractures of the lower left ribs would be important. A barium enema may show downward displacement of the splenic flexure of the colon. An upper gastrointestinal X-ray may show medial displacement of the stomach or, even without contrast material, we may encounter a distorted gastric air bubble. I think all available diagnostic procedures should be utilized in cases such as this, provided the patient's condition permits.

Dr. Broccolo: At surgery, in this patient there was 2000 cc. of fresh blood in the peritoneal cavity. Exploration revealed multiple adhesions, bilateral tubo-ovarian masses, and a normal pancreas. The spleen was the source of hemorrhage and was largely replaced by a subcapsular hematoma that had ruptured into the peritoneal cavity.

Dr. Freeark: We assumed that in the course of her many alcoholic debauches, trauma played a role in the development of this subcapsular hematoma that went on to rupture. I thought that the degree of intraperitoneal blood in both these cases, in the face of relatively stable blood pressure, good pulse, and good hematocrit was worth emphasizing. Is it usual to have such a good hematocrit when there is hemoperitoneum of 1000 and 2000 cc.? What is the answer to this problem of how much blood is lost and how can we decide as to the volume to be replaced?

Dr. Schmitz: I think this is one of the significant features of these cases and it deserves emphasis. In spite of the loss of over a liter of whole blood into the abdomen, the blood pressure, pulse, and hematocrit remained relatively unaltered. Failure to restore at least some of this blood loss before the induction of anesthesia and laparotomy may result in profound and irreversible changes in the vital signs with attendant morbidity and mortality. I am afraid we are forced to the conclusion that the much respected blood count—be it hemoglobin, red cell count, or hematocrit—is

of little value in the patient with acute blood loss.

What sustained these two patients was their youth. The older ones do not compensate so well. We have to presume not only that they were able to compensate for blood loss but that they did not have chronic preexisting deficiencies. In the older individual who is chronically ill or on a deficient diet, a state of chronic shock can exist in which the patient's reserve is depleted. In this situation blood volume studies are far superior to hematocrit, hemoglobin, or red cell count determinations. The patient may have a normal hematocrit but blood volume study may show an entirely different situation with the patient's total blood volume several pints of blood deficient. Either tagged albumin or the Evans blue technique is valuable when properly performed.

With only 5 cc. of blood on peritoneal tap I would never suspect there were 2,000 cc. more. How did you make up your mind to operate this case so promptly?

Dr. Freeark: The blood obtained by paracentesis was thick and did not suggest a hemorrhagic exudate. It appeared unaltered and not the so-called prune juice fluid of pancreatitis. The paracentesis blood had a normal amylase concentration and exploration seemed mandatory.

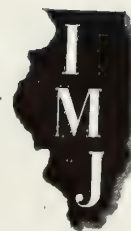
Dr. Broccolo: If you get a large amount of blood on tapping you often wonder if you have entered a major vessel. Does intraperitoneal blood ever clot?

Dr. Schmitz: You see clots in the peritoneal cavity but the blood that is aspirated through the needle usually is defibrinated and rarely clots.

Dr. Freeark: Have you seen harm result from diagnostic paracentesis? Is a hole in the cecum a possibility?

Dr. Garside: Colon perforation is a calculated risk. I am reminded of the story about the physician whose patient with ascites required frequent abdominal paracenteses. There was growing reluctance on the part of the patient to submit to this procedure. One day during paracentesis, fecal matter began coming out of the trocar needle as the patient began his usual pattern of complaints with "Doc, how much longer are you going to continue these taps?" To which the doctor replied, "I think this will be the last time."

EDITORIALS



Gastroenterology in the making

At the turn of the century, the medical profession was still wallowing in a morass of ignorance, hobbled by tradition. Bacteria had been discovered, and it was only the elderly physician, who believed that typhoid fever was rampant in the autumn because "humors" escaped from the dried out soil. Practitioners had shaved their beards and shed the silk stove pipe hat and Prince Albert coat. Possibly it was no longer necessary to appeal to the ocular sense. This was the antiseptic era, and because of the liberal use of carbolic acid, Lysol, and iodoform, the olfactory sense, if the wind was in the right direction, could detect the doctor at a considerable distance.

Gastroenterology was rather primitive. Although Roentgen had made his monumental discovery in 1895, it was not yet applied to the stomach and bowel. There were five varieties of chronic gastritis, each requiring a special diet. In the Vienna Clinic of Edmund Neusser (probably the world's greatest diagnostician of his time if not of all time), carcinoma of the stomach was diagnosed if a mass was palpated in the epigastrium and/or there was retromalleolar edema in the bed patient. If these findings were not observed, the condition was considered to be gastritis. However, if the stomach contents disclosed Opler-Boas bacilli, or if these bacteria were found on culture from feces, a malignant pyloric obstruction was diagnosed. Sarcinae were found in the stomach contents in benign pyloric

obstruction. General use of the test for occult blood had not yet taken place, although the guaiac test was used in some clinics.

Even if cancer could be diagnosed early, the outcome would have been the same. Anesthesia had not been developed sufficiently to allow such a major procedure as gastric resection and transfusions had not come into general use. Intravenous fluids were not given; normal saline was employed subcutaneously and per rectum. During this early period even cholecystectomy was considered too dangerous, and most surgeons merely drained the gall bladder in case of stones.

It was considered good practice in chronic gastritis to perform gastric lavage to remove mucus that was supposed to coat the stomach lining and, thus, interfere with digestion. This was before the time of Martin Rehfuss, who invented the small aspirating tube. The one in use was about as large as the modern Ewald tube. Most, if not all, of the mucus probably was formed in the pharynx because of the irritation of the tube and was swallowed. Despite the fact that modern texts still mention gastritis, its flame is pale and flickering but is being fanned by zealous gastroscopists. Some years later, for a limited period, the colon was similarly irrigated. Many gallons of water were used. This continued until the exhausted mucous glands could no longer cope with the situation. This treatment was devised to relieve symptoms of "autointoxication." At that time constipation

was thought to be due to sluggishness of the entire colon, even the small bowel. When Ivy was able to produce symptoms of "autointoxication" by inflating a rubber balloon in the rectum of a healthy medical student it was realized that constipation *per se* did not cause this condition.

The modern fluoroscope was seen by the writer for the first time in the Ewald Clinic in 1911. It took a year or so to establish fluoroscopy in America. St. Luke's Hospital was one of the first of Chicago institutions to install such an apparatus. James T. Case, roentgenologist at Battle Creek Sanitarium, spent every Friday at St. Luke's and on that one day made all of the stomach examinations not only for the hospital, but also for all other physicians who desired to avail themselves of this service.

In the early days of gastroenterology, duodenal ulcer rarely was diagnosed and was thought to occur chiefly as the Curling ulcer incidental to extensive body burns. Along in the 1920's Monahan of London, in a lecture before the Chicago Medical Society, pointed out the symptoms of this disease and stated that he had operated on 102 cases and his 103rd patient was awaiting his return. His diagnosis was based on symptomatology.

In 1902, B. W. Sippy, of Chicago, who had previously leaned toward neurology, went to Europe to study to become a stomach specialist. He became the outstanding gastrologist of Chicago. He devised a treatment for peptic ulcer, which—with modifications by various workers—is still being used. Before his time, Leube in Germany had insisted upon virtual starvation for seven to 10 days, using rectal feedings during this period. Rather elaborate meals including milk, eggs, glucose, and whisky were prepared. The sole value of these rectal meals was the psychological effect on the members of the family of the poor victim. At the same time, Lenhartz was feeding his patients a rather full diet, including meat, two days after a major hemorrhage.

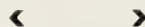
Before the advent of fluoroscopy it was difficult to diagnose esophageal lesions. This did not apply to benign strictures which were fairly common due to the accidental or suicidal swallowing of escharotics, usually lye. Sippy devised a dramatic scheme for determining the presence of cardiospasm, later called epicardiospasm and now, achalasia. He would introduce red fluid into

the stomach by means of a tube. Then the tube was retracted into the esophagus and a green fluid instilled. The tube was pushed again into the stomach and the red fluid recovered. Again it was pulled back into the esophagus and the green fluid aspirated. Sippy also invented a bougie for dilatation of stricture of the esophagus. This apparatus had "olive" tips of graded size. They were acorn-shaped, the larger end proximal. Occasionally, after the stomach was entered, it was impossible to retract the instrument through the cardia, thus necessitating gastrotomy. Plummer, at the Mayo Clinic, then devised spindle-shaped olives mounted on a whale-bone staff. This is still the standard instrument for benign stricture. If this instrument is inserted into the stomach it can always be retrieved.

Amebic dysentery was discovered by Loesch, a Russian, in 1875, and by the beginning of the 20th century the condition was well known. However, the cysts of ameba were not recognized. The treatment was almost exclusively by quinine enemas. Occasionally, silver nitrate was used in the same way, but because it was a painful procedure it was seldom made use of. Emetine was not known until it was isolated by Vedder in 1912. Before then ipecac was used and because of its emetic effect, some clinicians made enteric coated pills by dipping the raw drug in molten salol, which was the forerunner of enteric coating.

For the future it is hoped that the microbiologists, chemists, allergists, and clinicians will join up and endeavor to throw some light on the intricacies of such a romantic organ as the colon. Perhaps they will discover why a bacterium (one of an estimated 80 varieties) can live in harmony with its surroundings for many years and then finally kick over the traces and invade the wall of its habitation. These workers will look back to the dark ages of colon pathology and wonder how the clinicians of the first half of the 20th Century could have been so dumb.

A. A. Goldsmith, M.D.



Expensive prophylaxis

The press was informed last month by Arthur S. Flemming, secretary of health, education, and welfare that the fluorescent antibody technique

(Continued on page 334)

A SAFE CHRISTMAS

The Yuletide is near at hand, and I appreciate the opportunity of wishing all my colleagues and their families a Merry Christmas and Happy New Year.

Christmas is a festive time for all of us but it is especially joyous for our children and grandchildren. However, it brings additional hazards to the young fry and multiplies the usual number of natural booby traps that are present in the average home. The danger of fire and other types of injury is much greater due to the many fascinating decorations, lights, and tree trimmings that characterize the season. New toys present many problems especially when they are not suitable for the age of the child. Badly designed toys are dangerous especially those made with knife-sharp edges or of highly flammable cellu-

lose materials. Those having detachable parts that might be swallowed or inhaled also are unsafe.

We strive for better care of our patients through the use of preventive measures. Over the years we have done a good job in this respect. Our efforts must be redoubled during this joyful season to protect our youngsters and make them aware of the natural hazards encountered at this time of the year.

Alertness in our own families and among our friends and patients in our communities could pay off in projecting the joys of this season into our daily routine and removing one of the major causes of loss of life and disability in our children—accidents.

Merry Christmas.

Joseph T. O'Neill, M.D.



CHRISTMAS IN A HOSPITAL

Early in November the chaplain's office begins to receive requests asking for permission to sing or carol in the hospital during the Christmas holidays. Girl Scouts, high school groups, church choirs, college fraternities, and neighborhood clubs want to share their musical talents with the patients. From past experience, we know that most of the groups will do an acceptable job while others will sound like a barnyard serenade. Children's groups always bring real joy to our people even though their singing may not be as artistic as their leaders would like it to be. The student nurses with their happy smiles, pleasing voices, and crisp uniforms are the most popular carolers. Jews and Christians alike seem to grasp the joy of Christmas as the carolers sing; aches and pains are forgotten temporarily.

Many letters arrive from representatives of various groups who desire to present gifts "to all the poor children who are in the hospital on Christmas." One must be as "wise as a serpent and as harmless as a dove" in answering such letters. The fact is that only two or three youngsters will be present in pediatrics on Christmas and they will be too ill to enjoy anything, even Christmas. Every child who can enjoy the holiday goes home, even if it is only for the day.

Physicians, nurses, volunteers, and the church are all anxious to bring Christmas cheer to every patient in the hospital on this very special day. Hospital employees look forward to their departmental Christmas parties. The dietary department provides plenty of good food: potato salad, cold cuts, rolls, relishes, coffee, punch, cake, and cookies arranged in an attractive manner. Some departments supplement this menu with a slab of roast beef and a smoked turkey. Entertainment is provided by members of the groups, with serious and humorous readings, musical numbers, and carols to round out the informal two hour party.

The spiritual significance of Christmas is presented by the student nurses chorus in their annual Christmas concert. Nurses, aides, and volunteers assist ambulatory patients to and from the solarium for this sacred event. A brief formal worship service will be held in the chapel on Christmas eve.

At this time all hospital life seems to pause to commemorate the birth of a baby who was born long ago in a faraway place. As Christian people, we are drawn closer to Bethlehem and to each other during this season. May the peace and good will of this season remain with us throughout the year.

Robert A. Dahl, Chaplain

Chicago Wesley Memorial Hospital

for the rapid diagnosis of streptococcal infections has been validated in field tests.

"Once laboratories throughout the nation are tooled up to use it—and this will take considerable time—the quick, sure strep test will mean that physicians can start their patients promptly on the correct treatment schedule to eradicate the strep infection, and thus break the chain reaction of strep infection-rheumatic fever-rheumatic heart disease. Largely because of our inability to break this chain in the past, about 20,000 persons die each year from rheumatic heart disease and rheumatic fever."

He continued, "Throat swabs taken from 1,200 persons were listed by the standard method which takes several days and by fluorescent antibody technique which takes two to three hours. Results showed the fast test was as accurate as the slower method."

The plan demonstrates how impractical government agencies can be, especially when they have unlimited funds to spend and are pushed by well meaning fund raising organizations. We have no objection to the fluorescent antibody technique that was developed by Dr. Albert Coons and his associates in the early 1940s. But it is expensive, test materials are difficult to obtain, personnel must be trained, and the cost of ultraviolet light sources and other equipment is high. Most private laboratories would be pleased to have the equipment and personnel but the cost and limited need would discourage them from taking it on. Mr. Flemming is enthusiastic because he was told (and retold it to the newsmen) that 2 million Americans have had or will develop rheumatic fever at some time in life. Of these, more than 500,000 probably will die because of the rheumatic fever process or some complication developing from it.

There are no tests to determine who is predestined to develop rheumatic fever following a streptococcal infection. Statistics show that the incidence of rheumatic fever following a strep infection is 3 per cent. To prevent the first attack, therefore, means that the test would have to be done on every child in the United States who develops a cold. Those having a strep infection would be considered potential victims of rheumatic fever and would receive penicillin. The magnitude and danger of such a plan is beyond our scope of understanding, especially since most children have three to four respira-

tory infections a year. In addition, some one must visit the child, take the smear, and bring or send the secretion to the laboratory. This is a feat in itself.

But let's assume that the government plans to concentrate on the 2 million who have had rheumatic fever and will gear the program to prevent recurrences. We can eliminate most of the adults because they are not likely to have a second or third bout of rheumatic fever. Many of the remaining children are on prophylactic medication which—if we can believe statistics—has reduced greatly the incidence of recurrences. Furthermore, about 50 per cent of the recurrent bouts of rheumatic fever are not preceded by respiratory infections.

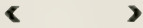
As a result, the need for the rapid test is limited to a relatively small group. Some of the youngsters with strep infections will be 100 or more miles from a laboratory capable of doing the rapid method. For them, even with helicopter service, it will be too late to treat the strep infection even though it takes the technician only two or three hours after she receives the specimen.

We can assume that the secretary is aware of these limitations. Meanwhile the Public Health Service is making plans to perform this more rapid method of testing for streptococci that are believed to be the forerunners of rheumatic fever. The battle plans are as follows:

1. Local personnel have been trained and equipment left on indefinite loan in the areas that participated in the field tests.
2. About 40 Public Health Service physicians assigned to state and local health departments held a special meeting in Philadelphia on October 26 to determine the best ways in which they could help health departments, medical societies, and heart associations throughout the country to take advantage of the new research avenues which the fast strep test has opened.
3. A two week training course for laboratory personnel of 12 state health departments will be held at the Communicable Disease Center in January 1960.
4. Materials and equipment will be loaned to laboratories as soon as they have personnel trained to use it.
5. Financial assistance is provided through grants from the National Heart Institute for

research projects and through state grants-in-aid for purchase of equipment.

This is an extravagant venture considering the need especially at a time when millions are burdened with high taxes.



Federal court adopts impartial medical testimony program

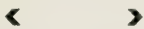
As the result of an intensive campaign on the part of the Committee for Impartial Medical Testimony of the Illinois State Medical Society and Chicago Medical Society, expert medical testimony in federal court cases has become a reality.

Announcement of this forward step in legal procedures, designed to modernize techniques of justice, was made November 2 by the United States District Court in Chicago.

Under Rule 20 of the District Court, prior to the date set for the commencement of the trial of any personal injury suit, an examination (physical, medical, psychiatric, either or all) of the injured person, together with a report thereon, by an impartial medical expert or experts may be ordered (1) by a judge on his own motion, or (2) on the motion of counsel for either party. The judge also may at any time during the trial order such an examination.

Should the case go to trial, either party or the court may call the examining physician or physicians to testify. The trial judge shall fix the compensation.

The expert will be drawn from a list furnished by the Illinois State Medical Society. This panel, which now includes 146 physicians in 21 specialties, was selected in co-operation with the specialty societies from 4,200 names submitted by physicians from all parts of the state.



Editorials from Other Journals

The betterment of living by enthusiasm

The continuing success of modern medicine is certain to extend life, but it is a fundamental task for geriatrics to make the longer life worth living. In this problem it may be that psychological motivation, barely undertaken, would help.

First it would seem that we must be sure to develop respect and interest in aging. There is always a tendency for younger people, in the freshness and joy of living, to fear and thus to scorn old age. It is something like the fear of death. We betray ourselves in our speech: We use euphemisms both for old age and for death. Let's learn to face old age, as well as death, and help others to be able to face these realities also. Why not honestly and straightforwardly speak of getting old, to being an oldster and, when the fact occurs, to dying and death? We can never escape the realities of age or of death by avoiding use of the words that are the symbols for the facts.

It is becoming more widely appreciated that a great opportunity exists for the general practitioner, and indeed for all the members of the growing health team, to follow patients along the course of living with systematic preparation, beginning in adolescence, for an approach to old age with dignity, self-reliance, self-confidence, and grace. This can be done as part of the business of promoting enthusiasm for living. It is always heartening when this enthusiasm, which is so much the part of adolescence and young adulthood, is carried into the later decades. It seems almost as though the practice of enthusiasm maintains the feeling and thus maintains itself.

It may well be that the essential factor in making our longer lives more worth living is enthusiasm for the good things in living. *Editorial. Chauncey D. Leake. Geriatrics Nov. 1959.*



Council meeting minutes

The regular October meeting of the Council was held at the Hotel Sherman, Chicago, on October 11, 1959, with the following present: O'Neill, Hesseltine, Hamm, Burdick, Camp, Clark, Redmond, Adams, Reichert, Portes, Piszczek, Dooley, Blair, Endres, Reisch, DuPuy, Goodyear, English, Montgomery, Fullerton, Klein, Oldfield, Hamilton, Cross, Reavley, Bennett, Limarzi, Bettag, Oblinger, Neal, Mirt, and Frances Zimmer.

MOTION: (Piszczek-Fullerton) that the minutes of the August 23 and September 27 meetings be approved as mailed. Motion carried.

Reports of Officers

Dr. O'Neill reported as president. He had at-

tended the annual meetings of the Kentucky and the Michigan State Medical Societies and called the attention of the Council to the fact that both these states have speakers for their House of Delegates meetings. He had attended various other committee meetings since the last meeting of the Council, including the Journal Committee, the Committee on Aging, and the Committee on Industrial Health.

Dr. Hesselstine, as president elect, reported that he had met with the Committee on Postgraduate Medical Education and Scientific Service, the Journal Committee, and the Committee on Industrial Health. He had attended the Springfield meeting on the problems of the aged, the annual meeting of the Michigan State Society in Grand Rapids, and the special committee meeting to select the outstanding general practitioner for 1960.

Dr. Montgomery reported as chairman of the Council. The Executive Committee at its meeting the night before, recommended that commercial exhibits at the 1960 annual meeting be open for three days: Tuesday, Wednesday, and Thursday. The Council concurred in this recommendation.

Committee on Medical Service & Public Relations

Dr. Hamilton reported that the committee had been unusually busy since the last Council meeting. Representatives attended the AMA meeting in St. Louis and the joint meeting on the problems of the aged in Springfield.

The questionnaire this committee was asked to develop has been prepared and is ready for state-wide mailing. It will deal with the general reaction of the physicians in this state to the acceptance of specified amounts as payment in full for the care of residents over 65 with limited income and limited capital. The questionnaire has been given to Blue Shield officers in Illinois and now the committee is trying to develop a satisfactory form. Blue Shield will issue such a policy, and the local county medical societies will have to vote to accept the amount of the coverage as full payment.

The Society needs a full time public relations man in the Chicago office. The work is important and information must reach all members of the profession in a crash educational program dealing with Forand type legislation.

The Illinois Hospital Association is anxious

to have a joint meeting with the ISMS to which will be invited administrators, members of the hospital boards, and the chiefs of staff. The meeting will be a one day affair, opening at 9:30 a.m., then dividing into groups for the rest of the morning session. After luncheon, panel reports will be made to the entire group. The suggested date is April 3, 1960, and the place for the meeting—Chicago. At this time the committee would like to have the meeting and the date approved by proper Council action.

New Ad Hoc Committee

Dr. Montgomery appointed the following Ad Hoc Committee to study and report on the location of the headquarters office of the Society: Lester S. Reavley, Chairman; C. Paul White; F. Garm Norbury, Raleigh C. Oldfield, and Arkell M. Vaughn.

Dr. Montgomery stated that this study and survey was to be done at the suggestion of the House of Delegates at its May 1959 meeting. The committee is to report both to the Council and to the House.

Called Meeting of the House

Dr. Montgomery also stated that he felt that the Council should consider a called meeting of the House of Delegates for the purpose of studying the management survey made by Rogers, Slade & Hill, and the report of the Ad Hoc Committee of which Hamilton was the chairman. The constitution and bylaws cannot be amended at a called meeting, but must be taken under consideration for action at the May meeting. Ample notice should be given the delegates and alternates. Most members of the Council felt that the delegates in their district were expecting a called meeting and would respond because of the general interest in society affairs.

MOTION: (Endres-Fullerton) that the Council recommend a called session of the House of Delegates, and that the executive committee set the time and place. Motion carried.

NOTE: The called meeting of the House of Delegates was held at the Hotel LaSalle, Chicago, on December 12 and 13.

Committee on Aging

Dr. Portes presented the report of the Committee on Aging as prepared by the Chairman, Dr. E. W. Cannady. Dr. Cannady asked that the

Council approve in principle the proposed research program to evaluate a classification project for nursing homes. This three year pilot study is to be conducted in Indiana and Illinois. Mr. Oblinger stated that this is a positive effort on the part of the nursing homes to raise their own standards of care for patients entrusted to them and should be encouraged. Dr. Hesselstine suggested that the Council approve the request as presented. Dr. Hamilton stated that the letter sent to Dr. Cannady should include the statement that there has been no change in the Council's attitude toward the solicitation or use of federal funds.

School Health

Dr. Fullerton reported as chairman. The committee met Saturday noon with all members present. A policy to regulate athletics for students in primary and secondary schools was discussed. The Committee recommends that joint conferences be held to study the comprehensive accident and health insurance coverage for schools, and to develop recommendations for the type of coverage to be supplied to school children. It is important that all physicians take an interest in this problem of school health, and participate in activities at the county and city level.

Impartial Medical Testimony

Dr. Richard J. Bennett reported that the Committee on Industrial Health had held four meetings since September 15, which have dealt with the development of the panels for impartial medical testimony. These panel members have had the opportunity to hear the best legal opinions relative to the services which can be rendered by the use of impartial medical testimony in the courts. The judges and the lawyers also are being informed of the type of services the use of panels can give them. The judges of the U.S. District Courts met October 8 and our committee presented the plan for their consideration. There will be a meeting on October 19 to get the rest of the panels organized. Outstanding speakers will be present from New York and Philadelphia. The committee thanks the Council for the co-operation given on this program.

Tuberculosis Committee

Dr. Piszczek stated that the Committee on Tuberculosis was consulted relative to the revision of the standards for tuberculosis hospitals.

There are 25 in the state, some of which are small; one, with 14 beds, has only six patients. It is the opinion of the committee that a hospital cannot be run without a good staff and laboratory facilities and services. The committee met in Springfield last Tuesday and discussed these standards with the representatives of the Department of Public Health, and we agree with them relative to the changes in the necessary standards for licensure. Institutions used as tuberculosis hospitals can be used for homes for elderly people, and thus fill a definite need in this field. Dr. Cross asked the committee to cooperate with representatives of his department, and if these suggestions are approved by the department, then they will be put into effect.

Society Retirement Plans

Dr. Hesselstine reported as chairman of the Committee on Retirement Plans. He read the "Certificate of the Secretary" to be executed and returned, as follows:

RESOLVED that the ISMS employees' retirement plan, as exhibited in this meeting, is hereby adopted on behalf of the ISMS, and the officers of the Society are hereby authorized and directed to execute and make effective the same as of June 1, 1959; and, in order to implement such Retirement Plan, an appropriate Trust Agreement be entered into between the Society, through its elected officers, and the Continental Illinois National Bank and Trust Company of Chicago, as trustee; and

FURTHER RESOLVED, that until further action by this Council and written notification to the Continental Illinois National Bank and Trust Company of Chicago, directions on behalf of the Society may be given to the trustee, concerning details of operation by the Society's Finance Committee through its chairman, Dr. H. Close Hesselstine;

FURTHER RESOLVED, that copies of these resolutions shall be certified and delivered to the Continental Illinois National Bank and Trust Company of Chicago by the Secretary or the Assistant Secretary of this Society.

MOTION: (English-Piszczek) that the Council adopt the resolution as read. Motion carried.

Postgraduate Medical Education

Dr. Limarzi reported that his Committee on

Postgraduate Medical Education and Scientific Service met on August 27. Only one postgraduate conference has been held to date, in Champaign on September 10. The attendance was 83. Future meetings scheduled are: District 5—Springfield, March 3, 1960, District 8—Mattoon, April 17, 1960.

Letters have been sent to the deans of the medical schools to determine if they would cooperate with the society in a circuit rider program, as this would seem to fill the needs of some of the downstate county medical societies better than a large conference. A report of the results will be made at the next Council meeting.

Wayside Press Contract

Dr. Reisch reported that the Journal Committee had approved the Wayside Press as the publisher for the Illinois Medical Journal for the coming year. The committee received information from Wayside that they would continue to print the Journal at no increase in printing costs, but that they would not guarantee the paper costs in this agreement. The committee recommends to the Council that Wayside Press of Mendota continue to publish the Illinois Medical Journal for another year.

Needs of the Woman's Auxiliary

Dr. Redmond, as chairman of the Advisory Committee to the Auxiliary, stated that it was the belief of the Auxiliary that they would not need assistance from the State Society except for the publication of their Roster (already furnished them) and also the publication of their Handbook for the annual meeting next May. They believe they will be financially able to conduct their own routine business, and that they will not need mimeographing services from the Chicago office.

Meetings Scheduled

MOTION: (DuPuy-Reisch) that the request from F. Garm Norbury, as chairman of the Committee on Mental Health, for permission to attend the AMA meeting in Chicago on November 20-21, be approved. Motion carried.

MOTION: (Portes-Fullerton) that Paul A. Dailey, as chairman of the Committee on Nutrition, be authorized to attend a symposium on infant nutrition sponsored by the AMA in New York on October 27. Motion carried.

MOTION: (Reisch-Fullerton) that the request for the \$100.00 annual contribution to the Illinois Society for Medical Research be approved. Motion carried.

Short Forms for Insurance Cases

The suggested short form for insurance cases submitted by the Warren County Medical Society was discussed by the executive committee. The committee felt that it could not recommend any action on this form unless it pertained to a state-wide form for distribution at the State Society level. The committee had no objections to the matter being handled at the county society level, and recognized that this action is being taken by many county societies throughout the state.

Emeritus and Retired Members

By official Council action the following candidates for Emeritus and Retired Membership were elected as listed:

EMERITUS: McIntosh, John, Mt. Carmel, Wabash County; Moore, Alfred N., Oakland, Coles-Cumberland County;

RETIRED: Becker, Carl F., Lincoln, Logan County; Rose, Milton E., Decatur, Macon County;

Public Welfare

Dr. Bettag reported as director of the Department of Public Welfare. He called the attention of the Council to the Commission on Mental Health, which is a statutory commission. As director of the department, he would like suggestions for appointments to this commission, and would advise that the names of two or more people interested in mental health be submitted for consideration. This matter was referred to the Society Committee on Mental Health of which Dr. F. Garm Norbury is the chairman.

The bond issue was defeated at the last election, but in November of 1960 there will be a new issue proposed for the improvement of facilities under the Department of Public Welfare. The department would like to have official approval from the State Society. This matter was referred to the Committee on Medical Service and Public Relations for a report at the next meeting of the Council.

The Council adjourned at approximately 1:00 o'clock.

Questions and Answers on Narcotic Act

The uniform drug, device, and cosmetic act

In Illinois the Uniform Drug, Device, and Cosmetic Act will be enforced by the Division of Narcotic Control effective January 1, 1960. This Act is drafted in compliance with the Federal Food, Drug, and Cosmetic Act in a manner similar to that in which the Uniform Narcotic Drug Act is drafted to conform with the Federal Narcotic Law.

A principal feature of the new law is that it defines "dangerous drugs" and makes it a misdemeanor for any unauthorized person to have such drugs in his possession or for any unauthorized person to sell them at retail. "Dangerous drugs" have been defined to mean any drug unsafe for self-medication, including barbiturates, amphetamines, and any drug which bears the legend "Caution: Federal Law prohibits dispensing without prescription". "Authorized persons" have been defined to include licensed medical practitioners, pharmacists, wholesalers, manufacturers, any person authorized to handle such dangerous drugs in a hospital or laboratory, or any person who has been furnished such drugs by his physician or on a prescription of a physician. Prescriptions for any dangerous drug shall be refilled only as directed by the practitioner.

The Act sets out in detail what it considers misbranding. These provisions do not apply to a medical practitioner so long as he has a label on the drugs he dispenses to his patients containing the name and address of the person, the name and address of the medical practitioner, and directions for use to the patient.

The Act sets out procedures through which new drugs may be placed upon the market and prohibits false and misleading advertisements for the cure of many diseases. The Statute contains a provision that if a person is prosecuted under

the Federal Food, Drug, and Cosmetic Act, he may not be prosecuted for the same violation under this Act.

The Division will direct particular attention to the distribution of dangerous drugs by unauthorized persons in an effort to get these drugs under the control of the medical profession.

Other recent legislation which might be of interest

The enforcement of the Hypodermic, Syringes, and Hypodermic Needles Act is now the responsibility of the Division of Narcotic Control. Prior to this time, this Act was enforced by the Department of Education and Registration.

Under this Act only medical practitioners, pharmacists, others engaged in business in which these needles are necessary, including farmers, are entitled to have possession of hypodermic needles or syringes. For any other person to have possession, it is necessary that he receive such syringes or needles from his medical practitioner or on a written or an oral prescription of this practitioner.

This Act was amended at the last session of the Legislature to provide that where a patient loses the prescription or the needle, he may obtain a hypodermic needle or syringe from a pharmacist upon the giving of a signed statement to the effect that the prescription was lost or the syringe or needle was broken, his name and address, the name and address of his physician, and the purpose for which the prescription was ordered. Copies of such signed statements have to be sent to the Division. This amendment was added to relieve inconvenience and distress incurred by individuals who are entitled to hypodermic needle and syringes, such as diabetics, who either had lost their prescription or broken

their needle. This also relieves the medical practitioner of having to give oral prescriptions to the pharmacist so that the pharmacist may replace these needles or syringes.

If the instrument is dispensed by a medical practitioner, a record must be kept of the date of the sale, name and address of the patient, and description of the instrument sold.

This Act does not place any restriction on the practitioner and as to whom he may sell such instruments.

The Act makes it a misdemeanor for the unlawful possession, unlawful sale (in case of pharmacists), and improper bookkeeping.

The Committee on Narcotics will be happy to answer additional questions concerning the use of narcotics under the new state law. They will be answered in this column in forthcoming issues.

Address your queries to the Editors of the Journal or to Jacob E. Reisch, M.D., chairman, committee of narcotics, Suite 1909, 185 N. Wabash Avenue, Chicago 1.

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Mastoidectomies

Generally speaking, any patient with acute or sub-acute discharge from the ear which does not respond to vigorous conservative treatment within a period of four to six weeks, should be considered for mastoid operation. This is particularly true when the ear is of the potentially dangerous type. It is difficult to justify the attitude of some otolaryngologists who tend to minimize the potential seriousness of disease of this type and carry on prolonged so-called conservative treatment when it has become quite obvious that operation is indicated. Conservative (but complete) mastoid operation will result in an ear that is no longer dangerous, and, in the vast majority of cases, a dry ear. Those with service-

able hearing usually maintain this hearing. Those with unserviceable hearing may have their hearing greatly improved by reconstruction of the middle ear and sound conducting mechanism (tympanoplasty).

During the 30 month period covered by this report, 45 modified radical and three radical mastoidectomies were performed for control of chronic ear infection. Cholesteatomas were present in 85 per cent of this group. Twenty-four of the patients had serviceable hearing before operation and it was maintained afterward. Of the 24 patients with unserviceable hearing before operation, eight had their hearing improved to the serviceable level. In all but one case the aural discharge stopped after operation. *James L. Sheehy, M.D. A Review of Operations on the Temporal Bone. California Med. Sept. 1959.*

CORRESPONDENCE



Correction

The first column of "Optimum Therapy in Coronary Heart Disease; Combined Medical-Surgical Management," by M. S. Mazel, M.D., in the October IMJ should read:

There are two reasons for adding surgical treatment to our present day medical management of coronary heart disease: 1. Despite an increase in our knowledge and a diversification of our medical techniques —e.g., the use of anticoagulants, long acting vasodilators, and psychotherapy—mortality and morbidity due to this disease continue to rise. At present, coronary disease is the direct cause of more than 300,000 deaths each year in the United States. 2. Since the prevention of atherosclerosis, particularly coronary artery sclerosis, is still a mystery, it is advisable to use presently available methods of therapy that are of proved value, whether medical or surgical, to minimize the painful or even fatal sequelae of coronary heart disease.

Clinical and Experimental Background

Diet, hereditary factors, and metabolic and hormonal interrelationships all play their respective roles in the coronary problem. Coronary disease may occur in the young as well as in the old. However, a single etiologic factor still has not been identified. Our present knowledge can be summarized as follows: The most impor-

tant factors in atherogenesis are an inherited predilection to the development of atherosclerosis and a life-long diet that includes more than 40 per cent of total calories derived from fats, plus a reduction in the amount of exercise during later life. Most authorities agree that there is an elevation of the serum lipid and lipoprotein levels in patients with clinical evidence of arteriosclerosis. Also, these patients tend to have an accelerated and prolonged hyperlipemia following the oral ingestion of fats. They have Mast cell counts significantly lower than normal.

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Clinics for crippled children listed for January

Twenty-two clinics for Illinois' physically handicapped children have been scheduled for January by the University of Illinois, Division of Services for Crippled Children. The Division will count 18 general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical, social, and nursing service. There will be two special clinics for children with cardiac conditions and, one each for children with rheumatic fever or cerebral palsy. Clinicians are selected from among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children

for whom he may want examination or consultative services.

January 6 — Hinsdale, Hinsdale Sanitarium

January 7 — Flora, Clay County Hospital

January 8 — Chicago Heights, St. James Hospital, (Cardiac)

January 12 — East St. Louis, St. Mary's Hospital

January 12 — Peoria, Children's Hospital

January 13 — Champaign-Urbana, McKinley Hospital

January 13 — Joliet, Silver Cross Hospital

January 14 — Mt. Vernon, Masonic Temple

January 14 — Springfield, St. John's Hospital

January 14 — Sterling, Community General Hospital

January 19 — Alton, Alton Memorial Hospital

January 19 — Danville, Lake View Hospital

January 19 — Peoria, Children's Hospital

January 19 — Quincy, St. Mary's Hospital

January 20 — Aurora, Copley Memorial Hospital

January 20 — Evergreen Park, Little Company of Mary Hospital

January 21 — Cairo, Public Health Building

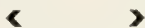
January 21 — Decatur, Decatur-Macon County Hospital

January 21 — Elmhurst Memorial Hospital of DuPage County, (Cardiac)

January 21 — Rockford, Rockford Memorial Hospital

January 26 — Effingham (Rheumatic Fever), St. Anthony Hospital

January 27 — Springfield (Cerebral Palsy), Memorial Hospital



State announces changes in serological tests

Effective January 1, the five diagnostic laboratories of the Illinois Department of Public Health in Chicago, Springfield, Champaign, Carbondale, and East St. Louis, will employ routinely two standard serological procedures, the VDRL and the Kahn test on blood and spinal fluid specimens submitted for diagnosis of syphilis.

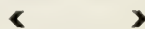
All such specimens will be tested first by the VDRL technique. Specimens found positive by this method will be re-tested by the Kahn procedure. On VDRL-negative specimens reports,

therefore, will give the VDRL results only. On VDRL-positive specimens reports will show both VDRL and Kahn results, the latter in quantitative terms, as heretofore.

"The VDRL test used in this manner will serve as a screening procedure, a role for which it is well suited, since it has been found slightly more sensitive than the Kahn," according to H. J. Shaughnessy, Ph.D., deputy director, division of laboratories. "The use of both tests will aid in the recognition of falsely-positive reactions that can be followed by further examination of additional specimens as needed. The latter may include a test with a treponemal antigen which, because of its costliness and certain inherent limitations, is available on a restricted basis in the Chicago laboratory only."

Requests for this test should be made only after consultation with the local full-time medical health officer on a special treponemal test request form obtainable from him or from the laboratory at 1800 West Fillmore Street, Chicago 12.

Shortage of operating funds requires strict adherence to the above plan for examining specimens, Dr. Shaughnessy said.



Narcotic regulations

Mr. George M. Belk, district supervisor of the Federal Bureau of Narcotics, whose jurisdiction covers the states of Illinois, Indiana, and Wisconsin, has informed this office that many physicians in the State of Illinois are obtaining their office narcotics by means of prescriptions written "for office use" or written in the names of their patients. This practice is in violation of Federal Narcotic Regulations.

Except as otherwise provided, a physician must obtain his narcotic drugs from a qualified dealer (such as a manufacturer, compounder, or wholesaler . . . a Class 1 or Class 2 registrant) on official government order forms.

A person qualified as a retail dealer (Class 3) also may supply registered practitioners or exempt officials on order forms, in quantities not exceeding one ounce at any one time, with aqueous or oleaginous solutions, compounded by such retail dealer, in which the narcotic content does not exceed a greater proportion than 20 per cent of the complete solution, to be used in legitimate office practice.

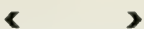
Examination in obstetrics

The American Board of Obstetrics and Gynecology will hold examinations (part II), oral and clinical, at the Edgewater Beach Hotel, Chicago, April 11-16. A bulletin outlining the requirements may be obtained from Dr. Robert L. Faulkner, secretary, 2105 Adelbert Road, Cleveland 6.



AAAS to meet in Chicago

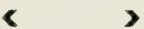
The American Association for the Advancement of Science will hold its 126th meeting in Chicago December 26-31. Eighteen sections of the AAAS and about 90 of its affiliated societies will participate in the meeting. About 1,200 papers on science from astronomy to zoology will be presented.



Blue Shield conference set

The 10th annual Blue Shield Professional Relations Conference will be held at the Drake Hotel, Chicago, February 1-3. The theme will be "Facing the Facts—in the Future of Blue Shield."

Among the subjects to be discussed will be: "The Federal Legislative Climate and the Future of Voluntary Health Care Programs," "Blue Shield Coverage for the Aged," "Public Opinion and Its Application in Shaping Future Developments in Blue Shield," and "How Business Management Judges Health Care Coverage in Relation to Present Needs and Future Developments."



Invitation from Hawaii

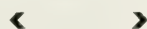
The Hawaii Medical Association has extended an invitation to Illinois physicians to attend its 104th annual meeting in Honolulu, May 12-15. The association, chartered in 1856, has operated under four types of government—a monarchy, a republic, a territory, and now a state. Since this will be the first meeting under statehood, an exceptional program of scientific and social events is being planned, according to Dr. Toru Nishigaya, president.

Further information may be had by writing to the Hawaii Medical Association, 510 South Beretania Street, Honolulu 13.

Exhibits at Student AMA meeting

Medical students, residents, and interns have been invited to prepare scientific exhibits to be displayed at the 10th annual convention of the Student American Medical Association in Los Angeles, May 4-8. The three exhibits judged most outstanding in student and resident-intern categories will win SAMA-Lakeside Awards ranging from \$100 to \$500. The top winners in each category also will exhibit at the AMA annual meeting in June, with expenses paid.

Applications should be sent to the executive director, SAMA, 430 North Michigan Avenue, Chicago 11. The deadline is January 1.

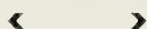


Seminar in nasal surgery

A seminar in "Reconstructive Surgery of the Nasal Septum and External Nasal Pyramid" will be held in New Orleans, February 10-13, under the auspices of the Department of Otolaryngology, Louisiana State University Medical School, and the Charity Hospital.

The American Rhinologic Society will co-operate in the presentation. Its founder, Dr. Maurice H. Cottle, professor of otolaryngology, Chicago Medical School, will be the guest director, and Dr. H. Ashton Thomas of LSU will be the executive director.

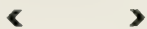
For further information, write to Dr. Robert M. Hansen, Secretary of ARS, 1735 North Wheeler Avenue, Portland 12, Ore.



Industrial health fellowships

The University of Cincinnati's Institute of Industrial Health is offering graduate fellowships in industrial medicine and graduate training for professional personnel other than physicians in the field of environmental hygiene.

Information may be obtained by writing to the secretary, Institute of Industrial Health, College of Medicine, Eden and Bethesda Avenues, Cincinnati 19.



Caribbean postgraduate cruise

The New York Medical College, Flower and Fifth Avenue Hospitals, will sponsor a 15 day postgraduate cruise to the Caribbean, departing from New York on February 25. The subjects

covered will include practical office and bedside problems of the general practitioner.

For further information, write to the Division of Graduate Studies, New York Medical College, Flower and Fifth Avenue Hospitals, Fifth Avenue and 106th Street, New York 29.

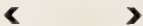


Course in radiation physics

The Northwestern University Medical School will present a course in radiation physics for residents in radiology at the Veterans Administration Research Hospital, 333 East Huron Street, Chicago, on Monday evenings, January 18 through May 16. The hours will be 6:45 to 9.

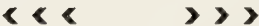
The tuition fees for residents will be \$25 and for physicians \$50.

Applications should be sent to the registrar, Northwestern University Medical School, 303 East Chicago Avenue, Chicago 11.



New nuclear medicine journal

The Society of Nuclear Medicine, 430 North Michigan Avenue, Chicago 11, announced that it will publish "The Journal of Nuclear Medicine" quarterly as its official organ beginning January 1. Manuscripts and books for reviews should be sent to the editor, Dr. George E. Thoma, Southwest Medical Center, 3915 Watson Road, St. Louis 9. The annual subscription will be \$10.

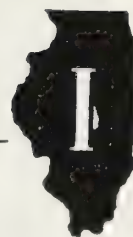


Psychodynamics of hospitalization

We live in an era that would make us think that man is merely a consumer of producers' goods. The advertising industry would have us believe man is made to buy cars and TV sets; that it is not man that matters but the things man has made. Another related exaggeration of our times is what Dietrich Von Hildebrand calls "efficiency"—an efficiency that sacrifices all human warmth and personal involvement to the goddess of production and of schedules. In such a kingdom all things and all persons must move according to schedule. Nursing has not escaped

these influences. Wherever a nurse is simply concerned with "room 322" or with the "gall bladder" of Dr. Smith's, instead of with "Mr. Brown"—the 33 year old father of four children, who has a diseased gall bladder and is in room 322—she is a victim of the depersonalization influences so characteristic of our era. It seems to me that in our hospitals particularly, we must plan a counterattack if the personal element is to be preserved, or more precisely, restored. *Sister Edith Tuberty, C.S.J., M.S.N. Psychodynamics of Hospitalization: Some Implications for Nursing. Minnesota Med. May 1959.*

AT THE EDITOR'S DESK



HYPNOSIS FOR CHILDREN

There is no limit to the use of hypnosis it seems. Deisher* uses this procedure on children as an adjunct to suturing lacerations and setting fractures. In his experience the squirming, frightened child becomes a co-operative patient. But from the description of the technique, it is neither as easy nor as time saving as it sounds. Furthermore the line between persuasion, suggestion, and hypnosis is thin. Local anesthesia is used frequently as a precautionary measure even though the hypnotist is certain it is not necessary.

Deisher is of the opinion that the acutely injured patient is a good subject for hypnosis but is completely uninterested in formal induction. He wants something done right away and subconsciously longs for magic or a miracle to "take away the hurt." The hypnotist concentrates on diversion, ego inflation, and reassurance. There is no doubt that hypnosis is the current medical fad. It reminds us of the saying "if matches had been invented after the cigarette lighters all of us would be using matches today."

PIPING HOT BLOOD

Shades of medieval medicine. Duke University surgeons are piping hot blood (107.6°F.) loaded with anticancer chemicals to cancer of the face and mouth. The blood is heated to intensify the action of drugs on tumorous cells. The surgeons

are of the opinion that the more limited the circulation to the diseased area, the better the results.

GENEROUS GRANT

The fight to lick psoriasis was given a boost in the form of a generous grant to Stanford of \$295,928 from the John A. Hartford Foundation, Inc. The investigation will be under the direction of the professor of dermatology, Dr. Eugene Farber. He will use the facilities and skills of other departments including chemistry, pathology, genetics, immunology, physiology, rheumatology, pediatrics, dietetics, and psychiatry.

HOME SOCIAL GUIDANCE

A Boston University child psychiatrist is sending trained social workers into the homes of emotionally disturbed children in crisis cases. These children need immediate care but the long waiting list at the guidance clinic prevents early treatment. Many of the more seriously ill youngsters had been hospitalized for two or three weeks, diagnosed as not psychotic, and sent back to a home where they again face the same problem. The clinic worker now goes to the patient's home and attempts to relieve the crisis responsible for the bizarre behavior of the child. Hospitalization is averted and family equilibrium re-established. On the other hand, when hospitalization is needed the family is in a better position to co-operate.

*Deisher, J. B.: Catch as Catch Can Hypnosis, GP 20:133-136, 1959.

A RECORD FOR ILLINOIS

The FDA reported on Oct. 14 that the radioactivity found in fresh vegetables is well within safe limits. The highest average total beta radioactivity found for any vegetable so far examined was 6,700 micromicrocuries per kilogram for spinach. The average for all vegetables from all sources was 2,520 mmc. The highest single value was 56,000 mmc obtained on a sample of spinach from Illinois.

The National Committee on Radiation Protection and Measurements has recommended 80 mmc of strontium 90 per liter or kilogram of solid food as the maximum possible level in the diet over an entire lifetime. These levels may be exceeded by varying amounts for varying periods without causing appreciable harm to the individual. An additional safety factor is provided by washing, peeling, and trimming in the preparation of vegetables by the housewife or by the commercial processing plant.

The current averages are running far below those reported in August. Average total radioactivity for alfalfa hay samples was 27,200 mmc per kilo and strontium 90 content ranged as high as 804 mmc/kil. Studies are being conducted to determine which vegetables have a greater affinity than others for strontium 90.

HOSPITAL COSTS UP

The average cost per patient day in the nation's nonfederal short term hospitals has risen steadily in the postwar years, according to the American Hospital Association. The following is the average cost by year:

Year	Average Cost Per Patient Day
1949	\$14.33
1950	15.62
1951	16.77
1952	18.35
1953	19.95
1954	21.76
1955	23.12
1956	24.15
1957	26.02
1958	28.17

STATISTICS

The Quarantine Service of the Public Health Service has had a busy year. Some 5,264,354

persons subject to quarantine inspection arrived in the United States—both aliens and returning citizens. This was an increase of more than 2 million over 1949. There were 70,607 inspections of airplanes for quarantine or immigration-medical purposes and 33,271 inspections of ships.

Secretary of HEW Flemming reports that "Six hundred and seven people were detained in ports of entry for medical observation in fiscal year 1959, an increase of 400 per cent over 1958. This sharp increase was due largely to the occurrence of smallpox in Heidelberg, Germany. In addition 117,310 incoming travelers were allowed to continue to their destinations in the United States but were required to be under medical observation for a time because of possible exposure to a quarantinable disease. Most of these persons came from areas where there were occurrences of smallpox and yellow fever. In cases where the danger of exposure was serious, the Quarantine Service notified local health officials at the destination of the traveler.

"The speed of international travel, wiping away the former protective barriers of time and space, has created a major problem in the transmission of contagious and infectious diseases throughout the world."

The Public Health Service informs us that the ratio of physicians to population in the United States has ranged between 131 and 135 per 100,000 persons during the past 20 years. It will drop to 126 per 100,000 by 1975 unless the rate of graduate students increases substantially. The real reason is that the population is increasing tremendously. How high it will go is a question that should be of equal concern to our government.

Congress appropriated \$17,344,000 for VA medical research for the fiscal year 1960, an increase of \$2 million over the amount appropriated for this purpose during fiscal 1959.

An October news release from Health News Institute was loaded with statistics. This accessory of the pharmaceutical industry is doing an excellent job of combating the mounting criticism of the high cost of drugs. According to the release, "... about 15 per cent of all prescriptions cost \$5 or more. However, 60 and 65 per cent cost under \$3, and the average price of all

prescriptions today is only about \$3. In addition, Americans spend less per person on drugs and medicines (\$18.75) than they do for tobacco (\$36.00), alcoholic beverages (\$53.00), and personal care such as beauty shops, barber shops, and toilet articles (\$24.00)."

PHARMACEUTICALS

Lif-O-Gen emergency oxygen inhalant is Linde's 20-ounce unit and is small enough to be carried in a brief case, purse, or in the glove compartment of a car. It contains enough oxygen for approximately 25 minutes when used intermittently. The container and plastic mask are disposable. The cost is \$6.95.

Bristol Laboratories announced the production of the first synthetic penicillin for medical use. The new product, Syncillin, has a structure similar to that of penicillin V but contains an additional methyl group. It represents the culmination of a 10 year research program, including important contributions from English chemists associated with Beecham Group, Ltd. of Beecham Pills fame.

Pfizer came back with an announcement of an improved synthetically modified penicillin, called Maxipen. They claim it has marked advantages over any form of penicillin now available to physicians. The product is still undergoing intensive evaluation and is not yet available to physicians.

Pfizer scientists have synthesized more than 1,200 penicillin compounds up to the present time. Maxipen showed promise of being one of

the best of their series of man-made antibiotics—even showing signs of improvement on the original substance.

The Upjohn Company announced a reduction in the price of its oral antidiabetic agent, Orinase. This reduction results in savings to patients of 50 cents a bottle, or one cent per tablet.

There is no end to the suggested uses of Atabrine and Aralen. A news release from the Winthrop Laboratories tells of the value of these antimalarials in treating petit mal. Either of these drugs was given to 13 children with a history of epilepsy ranging from 8 months to 8 years, alone or in conjunction with a regular anticonvulsant. Epileptic attacks ceased and electroencephalograms became normal in all patients within two to three days after the start of treatment. The attacks did not recur in the majority after the drugs were discontinued. According to the news release "The disappearance of the epileptic attacks and the normalization of the electroencephalograms of the patients in this series have never before been observed in patients having any other treatment for epilepsy." No mention or credit was given to the effects of the regular anticonvulsant that was used along with these antimalarial drugs.

The same Winthrop public relations agents have issued a release on a new coronary vasodilator, Myordil, that is still under clinical investigation. We assume this premature release was prepared to start patients clamoring for a vasodilator that is not yet on the market.

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NEWS of the STATE



ADAMS

MEETING. Dr. Carroll Bernard Larson, professor of orthopedic surgery, University of Iowa, spoke on "Backaches," at the November meeting of the Adams County Medical Society.

BOONE

MEETING. Dr. Carl Clark, councilor of the first district, spoke at the October meeting of the Boone County Medical Society.

COOK

FUND DRIVE. Dr. James J. Callahan, professor and chairman of bone and joint surgery at Loyola University's Stritch School of Medicine, will lead a yearly solicitation program of the school's 3,600 medical alumni in an effort to help meet the school's inflationary operating expenses. By 1963, expenses are expected to exceed income by \$400,000. Recently Dr. Callahan served as co-chairman of a 20 man medical school planning committee which recommended the construction of a multi-million dollar medical center on 54 acres in northwest Chicago on the Skokie border.

LECTURES. Dr. Francis J. Gerty, professor and head, department of psychiatry, University of Illinois College of Medicine, will speak on "Management of Neuroses in the Office," Jan. 6, 8:00 p.m., 225 Sheridan Road, Winnetka. This is the fourth talk in the tenth annual North Shore Hospital lecture series.

Dr. Kate H. Kohn, medical director of Rest Haven Rehabilitation Hospital, addressed the Illinois chapter of the American Physical Therapy Association on "The Physical Therapist's Role in Geriatric's Rehabilitation," at the Rehabilitation Institute of Chicago.

Dr. George B. Koelle, department of physiology and pharmacology, Graduate School of Medicine, University of Pennsylvania will speak on "Current Concepts of Hallucinogenic Substances," on Jan. 27, 8:10 p.m., 555 Wilson Lane, Des Plaines. This is the fourth in a series of talks sponsored by Forest Hospital.

The opening lectures for Northwestern University Medical School's sixth annual series on "The Growth of Medicine," will be: Jan. 5, "The Evolution of Quackery," Dr. Morris Fishbein, professor emeritus of medicine, University of Illinois College of Medicine; Jan. 12, "The History of Faith Healing," Rev. Richard Dahl, Chaplain, Chicago Wesley Memorial Hospital; Jan. 19, "Dawn of Histology," Professor Leslie B. Arey, professor of medicine emeritus, Northwestern University Medical School; and Jan. 26, "Emergence of Modern Medicine from Ancient Folkways," Dr. Walter C. Alvarez, professor of medicine emeritus, University of Minnesota Mayo Foundation. These talks will be given at 8:00 a.m. in room 641 of the medical school, 303 E. Chicago Ave., Chicago. The series has been planned under the chairmanship of Dr.

Frederick W. Stenn, assistant professor of medicine.

Dr. Ralph A. Reis spoke on "Diabetes in Pregnancy," for the Aaron Brown Memorial Lecture at New York Medical College in November. This is the fraternity lecture for Omicron Chapter of Phi Delta Epsilon.

HOSPITAL NEWS. Founded in 1882, Children's Memorial Hospital, is a 220 bed institution specializing in the treatment of children under 16. For the first time in its history the hospital has gone to the public for financial aid to build an addition. Of the amount sought, \$1,300,000 has been received from members of the hospital's internal family and a few advance contributors. Construction of the new part is expected to start next summer.

Ground breaking ceremonies for a \$12 million, 500-bed St. Joseph Hospital at 2900 N. Lake Shore Drive were held recently. Completion of the construction is scheduled for early 1963. The hospital is moving from its present location at 2100 N. Burling, an 87 year old plant. The hospital is operated by the Daughters of Charity.

CHICAGO SOCIETY MEETINGS. Dr. James E. Lebensohn, associate professor of ophthalmology, Northwestern University Medical School, talked on "Darwin and the Evolution of the Eye," and Helen Clapesattle spoke on "Westward for Health," at the November meeting of the Society of Medical History of Chicago.

The Chicago Surgical Society had the following program at their November meeting: "Clinical and Laboratory Studies of 5-Fluorouracil," Charles J. Staley, Nelson Cortes, and Frederick W. Preston; "Incidental Appendectomy During Repair of Groin Hernia," John L. Keeley, and Arne E. Schairer; "A Technique for Bicuspidization of the Aortic Valve of Dogs," T. E. Starzyl, E. P. Cruzat, and F. John Lewis; "The Post-mortem External Appearance of Congenitally Malformed Hearts as an Aid to Surgical Diagnosis," Albert H. Wilkinson, Jr., Willis J. Potts, and Maurice Lev.

The November program for the Chicago Neurological Society was "Skin Temperature in Paraplegias," Norman B. Dobin, Viecko Peltola, and James A. Fizzell; "Abdominal Epilepsy," Francis J. Millen; "Meningitis Complicating Pituitary Adenoma," Benjamin H. Kesert; "Relationships between Tone and Tremor in Parkin-

sonians and in Normals," Hirsh Wachs, Joel Brumlik, and Benjamin Boshes.

The Chicago Pediatric Society had the following program at the November meeting: "Streptococci and Rheumatic Fever—A Symposium." Dr. Albert Dorfman, director, LaRabida discussed, "Prophylaxis—Rheumatic Heart Disease;" Dr. Jeremiah Stamler, director Heart Disease Control Program, Chicago Board of Health, spoke on "Primary and Secondary Prevention of Rheumatic Fever in Chicago;" and Dr. Edward Press, Public Health Director, Mr. William Hixon, Public Health Officer, with Mrs. Harriet Kennedy, chief of laboratory division, Evanston Department of Health, discussed "The Community Program of Throat Cultures for Streptococci."

The Chicago Gynecological Society had their November meeting with this program: "Maternal Oxygen Administration and its Relation to Newborn Blood Oxygen," by Dr. James H. McClure, assistant professor of obstetrics and gynecology, University of Illinois College of Medicine; and a panel discussion on "Obstetrical Anesthesia," with participants Drs. William F. Mengert, professor of obstetrics and gynecology and head of the department, University of Illinois College of Medicine; Clifford A. Baldwin, Jr., chief of anesthesia, Evanston Hospital; Walter F. Dillon, assistant professor of obstetrics and gynecology, Stritch School of Medicine of Loyola University; Alfred J. Kobak, clinical associate professor of obstetrics and gynecology, University of Illinois College of Medicine; Ralph A. Reis, professor of obstetrics and gynecology, Northwestern University Medical School.

"Diagnostic Methods in Pulmonary Diseases," was the topic of a panel at the November meeting of the Chicago Society of Internal Medicine, Dr. David Cugell, Northwestern University was moderator, and panel members were Drs. William B. Buckingham and Benjamin Burrows, University of Chicago; Gordon L. Snider, Michael Reese Hospital; and Theodore Hudson, Wesley Memorial Hospital.

FACULTY. Drs. Rachmiel Levine, professorial lecturer in physiology, University of Chicago; Piero P. Foa, professor of physiology and pharmacology, and associate in medicine, The Chicago Medical School; and Arthur R. Colwell, Sr., professor of medicine and chairman, depart-

ment of medicine, Northwestern University Medical School are members of the faculty for the eighth postgraduate course in diabetes and basic metabolic problems scheduled for January 20, 21, and 22, Los Angeles.

AWARD. Dr. N. O. Calloway, president of the Chicago Urban League, received the Two Friends award given by the National Urban League in recognition of long years of service.

DeKALB

MEETING. The DeKalb County Medical Society held its election of officers at the November meeting.

DuPAGE

HONORED. Two physicians who have spent a total of 105 years in the practice of medicine were honored at a stag dinner given by the board of governors of Memorial Hospital of DuPage County. Dr. E. H. Oelke, who practiced medicine for 55 years, and Dr. L. H. Hills, who celebrated his 50th year in medicine, were cited at the dinner.

GREENE

MEETING. Mr. Vernon Stillman, business manager of Physicians and Surgeons Clinic, Quincy, spoke on "Adopting a Uniform Insurance Reporting Blank," at the November meeting of the Greene County Medical Society. "Management of Coronary Artery Disease," a movie was shown also.

HENRY

MEETING. Dr. Karl Dexter Nelson, Princeton, spoke on "Present Concepts of Rheumatic Fever," at the Henry County Medical Society November meeting.

LAKE

MEETING. Dr. Louis N. Katz, director, department of cardiovascular research, Michael Reese Hospital, spoke on "The Present Status of the Management of Atherosclerosis," at the November meeting of the Lake County Medical Society.

McHENRY

MEETING. Richard T. Arnest, M.C., USN, spoke on "Life in the Atomic Submarine Skate While Under the North Pole—The Medical and Emotional Problems Involved While Submerged

for 60 Days," at the November meeting of the McHenry County Medical Society.

PEORIA

MEETING. Dr. C. Rollins Hanlon, department of surgery, St. Louis School of Medicine, spoke on "Newer Diagnostic Measures in Diseases of the Biliary Tract," at the November meeting of the Peoria Medical Society.

ROCK ISLAND

MEETING. Mr. W. R. Clausten of the Medical Protective Company spoke on "Malpractice Insurance," at the November meeting of the Rock Island County Medical Society.

VERMILION

MEETING. Dr. Nathaniel Uhr, from Menninger Clinic, spoke on "The Internist Looks at Psychiatry," at the November meeting of the Vermilion County Medical Society.

WILLIAMSON

MEETING. The Williamson County Medical Society held election of officers at their December meeting.

WOODFORD

MEETING. The Woodford County Medical Society held a November business meeting at Rockford.

"YOUR HEALTH COMES FIRST" OVER RADIO CHICAGO WJJD:

During the month of December, spot announcements prepared by the Illinois State Medical Society will be given over Radio Chicago WJJD on Monday mornings from 10:45 to 10:55. These will include items of interest to the general public and excerpts from our former publication, **HEALTH TALK**.

On January 27, at 6:15 p.m., our regular monthly series of radio talks will be resumed with George Gee Jackson, associate professor of medicine, University of Illinois College of Medicine, discussing "The Common Cold and Other Respiratory Diseases."

LECTURES ARRANGED THROUGH THE ILLINOIS STATE MEDICAL SOCIETY:

OLIVER V. RENAUD, instructor in surgery, University of Illinois College of Medicine, addressed

the Morgan County Medical Society in Jacksonville, November 3, on "Carcinoma of the Breast."

SANFORD A. FRANZBLAU, clinical assistant professor of medicine, University of Illinois College of Medicine, Effingham County Medical Society in Effingham, November 11, on "Adding Life to Your Years."

CHARLES D. KRAUSE, clinical assistant professor of obstetrics and gynecology, University of Illinois College of Medicine, Knox County Medical Society in Galesburg, November 19, on "Urinary Stress Incontinence in the Female."

JORDAN M. SCHER, assistant professor of neurology and psychiatry, Northwestern University Medical School, Lee and Whiteside County Medical Societies in Dixon, November 19, on "When to Refer a Patient to a Psychiatrist."

GRANT C. JOHNSON, Director of Laboratories at the Memorial Hospital of Springfield, Macoupin and Montgomery County Medical Societies with the morticians of the area, November 24, in Carlinville, on "Evaluation of Autopsies."

IRVING H. ROSENTHAL, clinical associate in pediatrics, Chicago Medical School, Parent Teacher Organization of B'nai Sholom of Albany Park, November 27, on "The Adolescent Years."

WILLIAM J. BLACKWELL, associate in obstetrics and gynecology, Northwestern University Medical School, DuPage County Medical Society in Wheaton, December 16, on "Endocrine Therapy as Applied to Obstetrics and Gynecologic Problems."

SHELDON E. KRASNOW, clinical assistant professor of medicine, University of Illinois College of Medicine, will address the Englewood Branch of the Chicago Medical Society, January 5, on "Radioisotopes in Hematology."

KENNETH C. JOHNSTON, associate professor of bronchoesophagology, department of otolaryngology, University of Illinois College of Medicine, will address the Vermilion County Medical Society in Danville, January 5, on "Respiratory Tract Emergencies."

ORMAND C. JULIAN, associate professor of surgery, University of Illinois College of Medicine, will address the Bureau County Medical Society in Spring Valley, January 12, on "New Trends in Vascular Surgery."

LAWRENCE E. BRESLOW, clinical assistant professor of pediatrics, University of Illinois College of Medicine, will address the Parent Teach-

er Association of the Niles Public School, January 12, on "Physiological and Emotional Problems of School Age Children."

MILTON M. MOSKO, clinical associate professor of medicine, University of Illinois College of Medicine, will address the Stock Yards Branch of the Chicago Medical Society, January 15, on "Management of Allergies."

CAESAR PORTES, clinical assistant professor of proctology, Chicago Medical School, will address the Kankakee County Medical Society in Kankakee, January 19, on "Polypoid Disease of the Colon and Rectum."

HARRY H. GARNER, professor of neuropsychiatry, Chicago Medical School, will address the Logan County Medical Society in Lincoln, January 21, on "Psychiatric Aspects in the Management of the Surgical Patient."

DEATHS

CHARLES W. BIBB*, Chicago, who graduated at Meharry Medical College in 1916, died October 12, aged 74. He was a gynecologist and staff surgeon at the Chicago Hospital, and had served as president, vice-president and secretary-treasurer of the South Side Branch of the Chicago Medical Society.

GEORGE A. BOHRINGER*, Chicago, who graduated at the Chicago Medical School in 1921, died November 9, aged 65.

HANS BONIN, retired, Sarasota, Fla., formerly of Chicago, who graduated at Friedrich Wilhelms Universitat Medizinische Fakultat, Berlin, Prussia, in 1912, died May 11, aged 72. He had been a member of the staff of the American Hospital.

EDGAR C. BURTON*, Genoa, who graduated at Northwestern University Medical School in 1906, died October 12, aged 76.

ANDREW L. FISCHER*, Hoffman, who graduated at National University of Arts and Sciences Medical Department, St. Louis, in 1905, died September 28, aged 77.

RICHARD A. HARRIS*, Quincy, who graduated at the University of Illinois College of Medicine in 1924, died recently, aged 61.

CHARLES B. KABAKER*, Chicago, who graduated at the University of Michigan Medical School in 1938, died recently, aged 48.

JOHN M. LANG*, Del Mar, Cal., formerly

*Indicates member of the Illinois State Medical Society.

of Chicago, who graduated at the University of Illinois College of Medicine in 1900, died October 6, aged 87. He had practiced medicine in Chicago for 42 years.

IVAL G. LANGUM, St. Charles, who graduated at National Medical University, Chicago, in 1904, died October 27, aged 82. He was the city's first health officer, and served as mayor from 1929 to 1957, until he retired because of ill health.

JOSEPH P. McAULIFFE, Chicago, who graduated at Loyola University School of Medicine in 1918, died October 19, aged 75.

HAROLD F. McGRATH*, Chicago, who graduated at Loyola University School of Medicine in 1931, died October 13, aged 54. He was a member of the staffs of the Little Company of Mary and Holy Cross Hospitals.

JOSEPH H. M. OTRADOVEC*, retired, Chicago, who graduated at Rush Medical College in 1901, died November 6, aged 86.

LOUIS PARMACEK*, Elgin, who graduated at the University of Illinois College of Medicine in 1928, died November 2, aged 55. He was chief pathologist at St. Joseph's Hospital, Elgin. During World War II, he served as consultant pathologist to the 9th Army Medical Command.

IVAN MAGNUS SANDBERG*, Princeton, who graduated at the University of Illinois College of Medicine in 1932, died June 26, aged 55. He was associated with St. Margaret's Hospital in Spring Valley and Perry Memorial Hospital, and was county coroner.

IRA L. SCHNAER*, Chicago, who graduated at Università degli Studi di Bologna, Facoltà di Medicina e Chirurgia, Italy, in 1933, died October 16, aged 52. He was a member of the staff of Presbyterian-St. Luke's Hospital, and former

president and chief of staff of Edgewater Hospital.

GERALD LESLIE SHARRER*, Aurora, who graduated at Loyola University School of Medicine in 1938, died July 23, aged 51. He was a veteran of World War II.

JARDINE FRANK SINCLAIR*, retired, Chicago, who graduated at Dearborn Medical College, Chicago, in 1907, died October 20, aged 80. He was one of the pioneers in the practice of industrial medicine.

ELMER PHILIP STIEHL, Belleville, who graduated at Washington University School of Medicine, St. Louis, in 1908, died July 25, aged 73. He served for many years as county physician, and as district superintendent for the Illinois State Health Department. He was president of the Stiehl Drug Company.

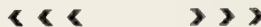
ARTHUR A. THIEDA*, Cicero, who graduated at Rush Medical College in 1930, died October 21, aged 54. He was a member of the staff of St. Mary of Nazareth Hospital for 30 years, and former medical director and health commissioner of Cicero.

GEORGE F. THOMPSON*, Chicago, who graduated at Rush Medical College in 1899, died November 9, aged 84. He was formerly president of the Chicago Surgical Society and on the staffs of several Chicago Hospitals.

JULIUS L. VERNEUIL*, Collinsville, who graduated at St. Louis University School of Medicine in 1929, died October 25, aged 54.

WALTER H. YOUNG*, Maywood, who graduated at the Chicago Medical School in 1936, died October 14, aged 52. For the last four years he had been central area physician for the American Can Company.

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